

The role of farmer self-identity in agricultural decision making in the Marston Vale Community Forest

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Abstract

In 1989 the UK Government announced a scheme to create 12 'Community Forests' in areas of urban fringe despoiled by industry and intensive agriculture. Political dogma of the time decreed that the dedication of land for the forest was to be on a purely voluntary basis, with the farming community encouraged to establish large areas of woodland and diversify into providers of leisure facilities and woodland related products. Unresolved, however, was the question of whether farmers would voluntarily move away from traditional farming roles associated with production of agricultural commodities and around which their self-identity is defined. This study focuses on the question of whether farmers' self-identity is likely to influence their uptake of the Community Forest scheme. To investigate this, a conceptual framework was developed based on Sheldon Stryker's (1968) *identity theory*. This introduces into geography the concept that the 'self' should not be viewed as a single entity (as in attitude studies), but should be viewed as a hierarchical structure of identities mirroring the structured nature of society. Salience of these identities influences choice of role-behaviour, particularly in times of crisis where a change of role may be required.

From the literature it was possible to distinguish four basic 'identity sub-cultures' - namely, 'agricultural producer', 'diversifiers/entrepreneur', 'conservationist', and 'agribusinessman'. Through analysing preferred role-behaviour and identity salience, it was established that farmers with distinct identities generally exhibit behavioural patterns consistent with these identities. In particular, farmers who see themselves as 'conservationists' and 'diversifiers' appear more willing to accept the role changes required by the Community Forest than those whose identity centres on agricultural production. A qualitative investigation of how woodland, diversification, and leisure provision may conflict with farmers' identity revealed that, for the majority of farmers, woodland does not have the same social value as other agricultural crops. Thus, even if woodland becomes economically viable for small farmers, the social costs of establishing large woodlands on farms and changing the farming role need serious consideration.

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Chapter 1: Introduction

This chapter introduces a study of the effect of farmer self-identity on the uptake of the Marston Vale Community Forest. It presents a brief introduction to the Community Forest scheme and provides a description of the Marston Vale area. It further identifies cultural resistance to the roles associated with Community Forestry as a potential reason for the slow uptake of the scheme by the farming community, and outlines the following study conducted to investigate this phenomenon.

1.1 The Community Forest scheme - ‘trees with everything’

In July 1989, as the result of an earlier publication “Forestry in the Community” (Countryside Commission, 1987), the Countryside and Forestry Commissions announced their joint intention to establish a major new forestry initiative with the creation of the new National Forest and 12 smaller Community Forests (Wagner & Nicholson, 1990) (see Figure 1.1). This heralded the arrival of an innovative new approach to forestry development in England and Wales; the concept of multi-purpose forestry, whereby forests should not only produce timber but also provide for conservation and recreational interests as well as assist in the development of the rural economy.

Community Forests are not intended to be forests in the broader sense of the term. To many, a forest is simply “a large area covered chiefly in trees and undergrowth” (Allen, 1991: P461) or “continuous trees stretching as far as the eye can see” (*Marston Vale Community Forest* (MVCF), 1993: P1). Historically, forests have represented both a ‘waste’ to be tamed and brought into production - for example, the Norman culture in England (Bracey, 1970) or the early settlers in New Zealand (Wilson, 1992b) - and, to many hunter-gatherer societies, a bountiful, self-replenishing larder. In modern Britain however, forests and woodlands serve principally either commercial or leisure purposes,

and are seen by society as neither a 'wasteland' nor a food source but rather as a national asset - a part of the landscape and culture.

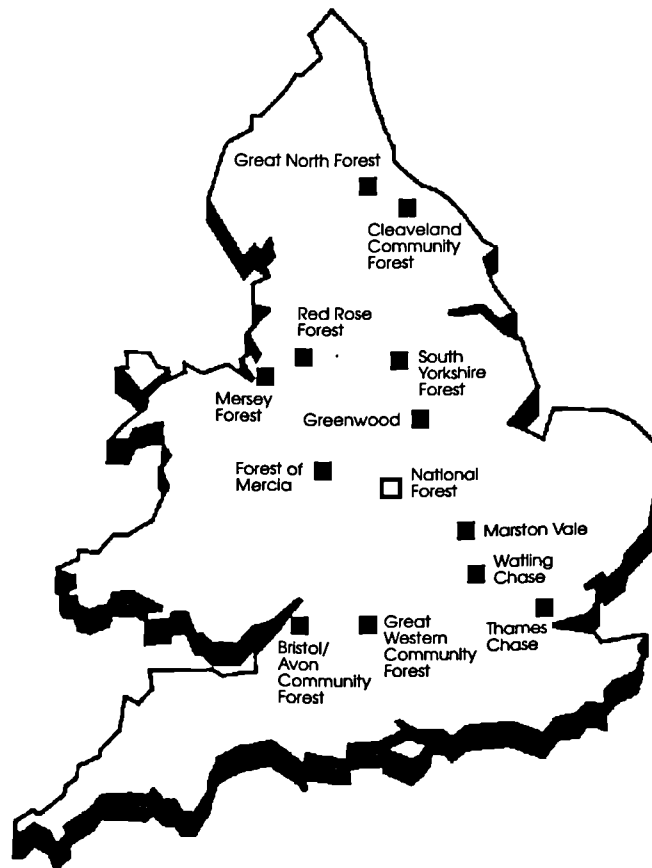


Figure 1.1: Location of Community Forests and the new National Forest in England (adapted from Countryside Commission, 1991).

The vision of Community Forests is based neither on establishing a forested and unregulated wilderness, nor on developing forestry for strictly commercial and leisure purposes, but on the medieval concept of forests as established by the Norman kings - a forest like the New Forest (Countryside Commission, 1991). Definitions of the Norman forests vary, but in general they centre around four aspects: private ownership, hunting, varied land uses, and, as Blunden & Curry (1988) and Rackham (1990) point out, the almost incidental rather than instrumental existence of trees. Forests were the hunting reserves of the nobility usually at least part owned by the sovereign, or simply “the park or the cultivated ground of the manor” (Spray, 1990: P111). Within the defined boundaries of the forest were included “ordinary farmland, private woodland, villages

and towns” (Rackham, 1990: P166). The model adopted by the Countryside and Forestry Commissions combines features of these medieval forests with those of European recreational forests such as the Dutch *Randstadgroenstructuur* (Bishop, 1991; Counsell, 1995), urban green areas funded, owned and managed by central government (see Van Gessel, 1990). The idyllic ‘vision’ of the Community Forest is laid out in the promotional leaflet *Forests for the Community* (Countryside Commission, 1991: P1 - layout original) as:

*“Imagine a magnificent forest - a forest of oak
and ash, hawthorn, hazel, Scots pine and yew.*

*Within the forest a mosaic of woods, farmland,
open spaces and lakes create a rich and varied
scene.*

*Here are farm and forest businesses, but also
opportunities to relax, walk and ride, and areas to
enjoy sports, the arts and other leisure activities.*

*Now imagine all this near your city.
For this is a **Community Forest**, a major new
initiative from the Countryside Commission and
the Forestry Commission.*

*Shaped by landowners, farmers and local
people for themselves and their children, these
living, working forests will be landscapes to
cherish for generations to come.”*

The actual physical structure that forests must follow was laid out in the Countryside Commission’s *Advice Manual for the Preparation of a Community Forest Plan* (Countryside Commission, 1990). Community Forests are designated areas in the urban fringe ranging in size from ten to fifteen thousand hectares, one-third to two thirds covered in trees which should be predominantly broadleaved and usually planted on low quality agricultural land or derelict industrial sites - the existence of derelict industrial land being one of the criteria on which Community Forest applications were judged.

Forests are designed to supply a mixture of both commercial products and recreational facilities - with both land uses juxtaposed within the forest boundaries. The overall objective of the forest plan is to encourage the regeneration of the rural-urban fringe landscapes, aesthetically, economically and environmentally using a combination of marketing, volunteerism and free market forces. It is a pro-development approach under the basic philosophy of “trees with everything” (Countryside Commission, 1990: P6). Consequently all current uses including industrial, mining, farming, transport, and housing development are allowed within the remit.

For the farming community the Community Forest scheme was intended (using only the existing system of woodland grants) to encourage the integration of a diverse range of farming and business interests, such as recreation, light industry, tourism and forestry, thus giving agriculture a more entrepreneurial image and exacerbating, in a controlled fashion, the current socio-economic trend of agriculture “away from farming as a ‘way of life’ towards its organisation ‘as a business’” (Urry, 1984: P46). In this sense, it reflects part of the then Conservative government’s beliefs that the British culture should be one based on economic independence, entrepreneurship, innovation, and initiative (Boucher *et al.*, 1991), and farmers consequently should be small businessmen/entrepreneurs rather than state agriculturists reliant on government subsidies.

1.2 The Marston Vale Community Forest zone

The selection of the Marston Vale area of Bedford as a Community Forest zone was publicly announced on February 13, 1991 by the Bedfordshire County Council’s Environmental Services Committee (*Bedfordshire County Council* (BCC), 1991b) - and by 1993 a draft plan for the establishment of the Community Forest had been prepared and released as a consultation document (MVCF, 1993). Marston Vale itself adequately meets the criteria laid down by the government as an urban-fringe area despoiled by industry and in need of regeneration. The Bedfordshire County Council Planning Department (BCC, 1991a: P1) described the area as:

“ ... nationally known for its ravaged landscape. Clay extraction on a massive scale, over a prolonged period and with little attempt at restoration, brick making with its associated air pollution, and intensive agriculture, all have left their mark on an area not blessed with a varied natural topography that could have hidden some of the scars”

This was not always the case. The natural vegetation of Marston Vale, as with much of lowland Britain, is woodland (Fitchett, 1943) and historical reminders of Bedford's wooded past exist in the place names within the Community Forest zone, such as Wootton, Wood End, and Stagsden. Stagsden itself, now devoid of woodland, is recorded in the Domesday Book as an enclosed medieval deer park (Reed, 1990). In addition to historical deforestation, Marston Vale was also particularly badly affected by the onslaught of dutch elm disease in the 1970s (see Jones, 1981) as anecdotal reports from within the farming community report that elm constituted the dominant hedgerow tree in the Vale and, consequently, its demise devastated the countryside (see Appendix i).

The Forest zone covers an area of 16,000 hectares from the town of Bedford to the M1 motorway in the South. A natural shallow valley, Marston Vale is flanked by two ridges consisting of Lower Greensand in the South and East and a ridge of Boulder Clay in the West, with the valley bottom consisting mainly of Oxford clay (MVCF, 1993). The forest boundaries extend beyond the geographical boundaries of the 'Vale' to the county boundary between Bedfordshire and Buckinghamshire in the west and over the southern ridge (termed by the Community Forest team the 'Brogborough Gateway') as far as the M1 (see Figure 1.2).

Marston Vale acts as a geographical corridor between the town of Bedford (and its satellite villages) and both the M1 and Milton Keynes, and has consequently become an important centre for transport. The A421 running down the Vale between Bedford and the M1 is an exceptionally well used route (Between 1500 and 2500 heavy goods vehicles per day in 1989, BCC, 1992). Because of the proximity to one of the country's main transport links, the increasing size of the Milton Keynes market, and the continued urban growth towards the south of Bedford, the area is, as with Eastern Bedfordshire (Whatmore *et al.* 1987b), under considerable development pressure.

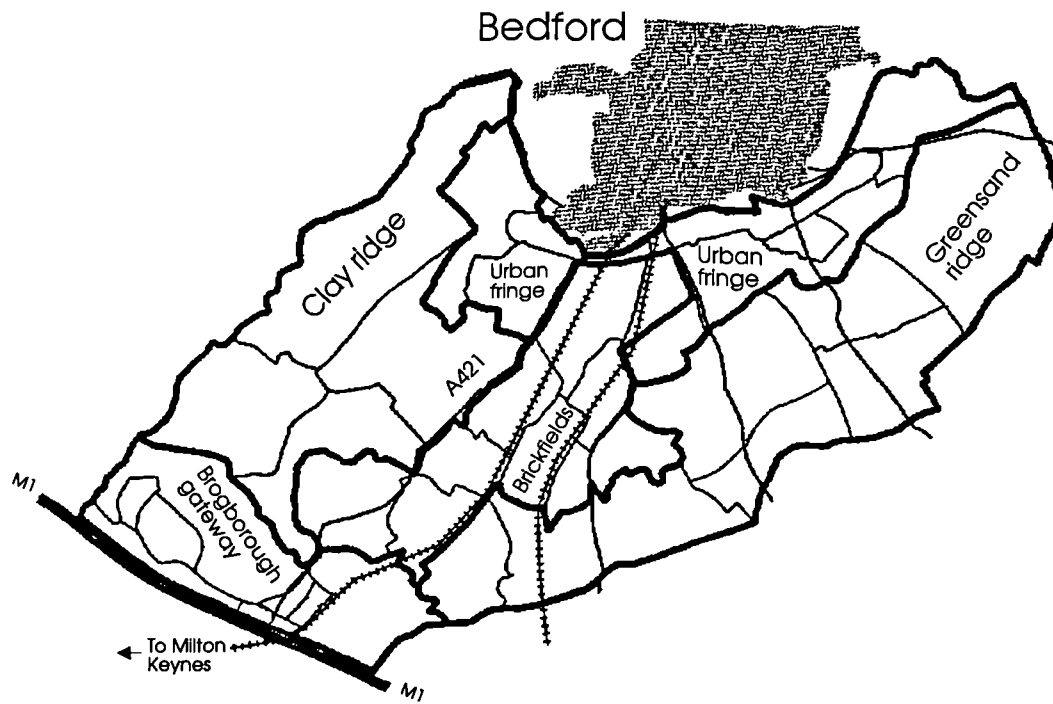


Figure 1.2: Landscape zones and main transport routes within the Marston Vale Community Forest (adapted from MVCF, 1995: P57).

The response of landowners to the Marston Vale Community Forest has been very patchy. Greatest success has been achieved in obtaining land and capital from the major corporate landowners *Hanson Properties Ltd* and *Shanks & McEwan* in return for securing planning permission (Tiffin, 1993). The other groups involved in major wood-planting schemes are the Woodland Trust and Bedford Borough/County Councils. The latter have planted twenty five hectares of woodland and meadows on the Council owned site at Berry Farm as well as purchasing other areas within the forest for woodland planting (see *Common Tree*, Summer 1995; MVCF, 1997). Notably absent from the list of major contributors is the farming community. The Community Forest team announced in 1993 that 3 - 4,000 hectares of farm woodland should be planted in the Marston Vale (MVCF, 1993). However, in 1997 the MVCF project team (MVCF, 1997: P3) observed that the lack of opportunities for farm woodland planting constituted “the one disappointment ... Tree planting schemes have primarily been implemented on other land.” This is a major problem for a scheme which aims to regenerate the urban fringe economy and is reliant on the voluntary establishment of woodland/recreation

facilities by small scale landowners. The main target group, small farmers and landowners, appear to be broadly rejecting the concept of Community Forests.

1.3 Farmers and Community Forest - farmers to foresters?

Thus the Conservative government's attempts to create a new generation of leisure providing, forestry oriented, entrepreneurs appears to have encountered early difficulties. This problem, also noted by Hodge (1996: P335) in his appraisal of the Rural White Paper (DoE & MAFF, 1995), is that there has been a "gap in the thinking" in the former government's attempts to create landscapes for public enjoyment, "Where do the ideas come from? Who are the new entrepreneurs?" Adherence to principles of the free market means that the establishment of successful 'working' Community Forests (as in the original vision - see Countryside Commission, 1990) is entirely dependent on the farming community voluntarily leaving the traditional role of the farmer and adopting new entrepreneurial roles. However, evidence is beginning to mount from Community Forests and the National Forest that farmers do not share the vision of their future that is currently being disseminated by the politicians (e.g. Bullock *et al.*, 1994; Pearce, 1994; Williams *et al.*, 1994; Allison, 1996; Tiffin & Burton, 1996). There is a widespread perception amongst policy-makers that this is simply a question of economics and that, given appropriate economic circumstances, farmers will adopt community woodland projects (e.g. MVCF, 1997). However, there is also a growing body of evidence suggesting that socio-cultural factors may play a more significant part in farmers' rejection of woodland planting than previously supposed.

For example, Williams *et al.* (1994: P27) suggest that the negative responses to their questionnaire survey in the Greenwood Community Forest all appeared to be '*underlain*' with "... the idea that '*farmers were not foresters*'." Reaching a similar conclusion, Allison (1996: P142) observes that '*underlying*' the responses to his survey of farmers in the National Forest was "the meaning of life. Farmers want to farm. *It gives them their identity* and their sense of achievement." It has been hypothesised that, through a prolonged period of stability and subsidy, the farming culture has developed to value the role of 'agricultural producer' above all other non-farming alternatives

(Shucksmith & Winter, 1990; Ilbery, 1992; Ilbery & Bowler, 1993) and, consequently, has firmly established the tweedy ‘farmer steward’ as the cultural image of a ‘good farmer’ (McEachern, 1992), and agricultural production as the ‘moral’ use of the countryside (Potter & Gasson, 1988; Bullock *et al.*, 1994; Selby & Petäjistö, 1995). Establishing woodland on agricultural land and performing the perceived roles of a ‘forester’ will clearly affect farmers’ ability to view themselves as ‘good’ farmers.

1.4 Social resistance to the Community Forest

The observation of Williams *et al.* (1994) and Allison (1996) that there is a socio-cultural construct underlying farmers’ adoption of woodland raises the issue that many studies of agricultural decision-making fail to account for social and cultural influences in agriculture. Recent studies of the uptake of agri-environmental schemes (e.g. Brotherton, 1991; Wilson, 1996) have tended to maintain the behavioural approach centred around the concept of satisficing, i.e. that farmers do not necessarily indulge in economically optimal decision-making, but instead may optimise social, intrinsic or expressive goals (see Gasson, 1973). Thus, it is contended, by measuring socio-psychological constructs such as attitudes, values and goals the non-‘economically optimal’ elements in agricultural decision-making can be accounted for. However, the ‘satisficing’ approach has been the subject of criticism from humanistic geographers as merely serving to negate the discredited perspective of ‘economically rational man’ and consequently failing to take sufficient account of the social and cultural elements involved in decision-making (e.g. Harvey, 1981; Ley, 1981).

Although it has been observed that cultural factors such as history, social values and self-identity can have a considerable impact on agricultural decision-making by diverting conventional ‘rational’ trajectories of change (Short, 1997: P42, Young *et al.*, 1995), the social influences on farming “represent a *serious gap in our knowledge*” (Ilbery, 1983: P329 - also see Young *et al.*, 1995). Part of this may be attributable to the difficulties encountered in operationalising the concept of ‘culture’ as, “through its very complexity, ‘culture’ serves to obfuscate that which it is meant to name” (Mitchell, 1995: P112). Nevertheless, there does not appear to have been much effort engaged in

developing cultural frameworks within the field of agricultural geography. One of the issues that makes culture difficult to operationalise is that it is a multi-dimensional construct - composed, not of a single common social perspective, but of a multitude of temporally and spatially overlapping sub-cultures (Young *et al.*, 1995). Yet, if this is an 'underlying' factor behind responses to the Community Forest scheme, then it is clearly imperative that a framework be devised for its investigation.

One possible approach is to adopt a simplified perspective of culture by limiting the number of sub-cultures under investigation. Summarising the main issue: the problem appears to be that the established farming role is being forced to undergo change as a result of an economic crisis in the agricultural industry and changing public expectations. This is being met by cultural resistance to the new roles which are widely viewed as not being part of 'farming', i.e. they are simply not something 'farmers' do. However, while *not all* farmers wish to become entrepreneurs and *not all* farmers wish to become foresters, there are no doubt *some* farmers who consider the new roles as acceptable to undertake while still maintaining their 'farmer' self-identity (see Morris & Potter, 1995). For example, a farmer who enjoys wildlife and conservation may wish to establish woodlands for conservation purposes and consider this as not incompatible with his/her existence as a farmer. Similarly, a farmer who enjoys contact with non-farming people and variety in daily routines may consider providing leisure facilities as compatible with farming. In contrast, a farmer heavily imbued with the productivist ethos may find neither of these alternatives acceptable.

Analysis of typologies of agricultural activity suggests that there are four main farmer 'types': (a) 'traditional', 'yeomen' or 'conservative' agricultural producers, (b) 'agri-business', 'commercial', 'corporate' or 'accumulator' farmers, (c) 'conservationist' or 'organic' farmers, and (d) 'diversifiers', 'disengagers' or 'entrepreneurial' farmers (see Marsden *et al.*, 1986; Shucksmith, 1993; Wilson, 1992a, 1996; Battershill & Gilg, 1996; Austin *et al.*, 1996). While there is likely to be some overlap between the four farmer types, this will be limited by the degree to which their roles are compatible. For example, if a farmer holds conservation as his/her highest priority, it is impossible for commercial productivity to also be maximised. Likewise a 'conservative' farmer who is against changes to the farming role cannot also give full priority to the pro-change

entrepreneurial role. As these groups represent different sections of the farming community with conflicting goals and values as farmers, it can be hypothesised that they represent specific sub-cultures within the farming community and are likely to react differently to the Community Forest proposals. Hence a possible cultural approach to investigating farmer behaviour is beginning to emerge.

The crucial aspect, however, is that these 'cultural' labels make sense to the farmers themselves. The typologies mentioned above have generally been derived (with the exception of Shucksmith, 1993) from quantitative data of farm/farmer characteristics with little consideration as to whether they are meaningful within the farming community itself (consequently they have been criticised as positivistic by Whatmore *et al.*, 1987a). If the farmer types have internal meaning within the farming community, with an ascribed set of roles appropriate to each farmer 'type', then it can be argued that cultural group or identity provides a motivation for behaviour, i.e. the potential loss of self-esteem in the eyes of one's peers or oneself is likely to lead to behaviour consistent with the identity. By investigating the nature of these sub-culture or 'identity' groups and how changes in role may affect their self-identity as a 'farmer', an understanding of the cultural barriers to the Community Forest scheme may be developed.

A particularly interesting question is: at what point is a farmer no longer regarded as a farmer by his/her peer group? Clearly a farmer with 100% income from agriculture is a farmer, and a businessman on a farm with 100% income from diversification schemes is not a farmer - but at what point between these does an agricultural producer lose his/her status as a farmer and why? Does this also differ between the farming identity group? Does farming identity group affect the choice of diversification scheme?

In answering these questions it is important to remember that there are considerable economic motives for not establishing farm woodlands. For example, establishing farm woodlands may decrease the value of land, provide a lower return for investment than agricultural crops, withdraw capital from investment in agricultural production, provide an uncertain 'harvest' income, and reduce the ability of the farmer to respond to market fluctuations (see Gasson & Hill, 1990). If the decline in the agricultural industry continues and woodland become increasingly competitive with agricultural crops,

economic resistance to the Community Forest is likely to decrease and the impact of the social resistance of farmer identity increase. There is some corroborative evidence to support this contention as Coughenour (1976) suggests that during economic crises 'social commitment' to farming type becomes an important predictor of farmer response. Thus farmers' attempts to maintain their cultural self-identity can be expected to become an increasingly relevant issue in the Community Forests of the future.

1.5 Objectives, methodology and structure

There are three main objectives to the study. The first is to develop a conceptual framework for investigating the role of farmer identity on agricultural decision making. Behavioural geography has, in the past, borrowed many concepts from sociology and psychology. However, since the 1970s as the prominence of behavioural geography has declined, so the process of cross fertilisation of ideas between disciplines has become less common (Kitchin *et al.*, 1997). Consequently, whereas behavioural geography has maintained its concentration on attitudes, goals and values, the field of social psychology has evolved to consider self-identity as a key factor in motivating behaviour (Shamir, 1992; Stryker & Serpe, 1994). Thus it is proposed to integrate concepts and theories from role and identity-based studies in order to construct a conceptual framework for investigating the influence of farmer self-identity on the adoption of the Community Forest scheme. Of particular interest in this respect is Stryker's (1968) 'Identity theory' - a 'limited' theory based on the principles of symbolic interactionism - which forms the basis of the conceptual framework.

The second general objective is to use the conceptual framework as a basis for investigating the influence of farmer self-identity on the adoption of the Community Forest scheme in the Marston Vale. In particular, the study aims to classify farmers (using cluster analysis) into the four theorised 'identity' groups on the basis of their own role-behaviour preferences, to establish whether farmers recognise these groupings through measuring self-assessment of commitment and salience of the identities, and to identify behaviours or farm features that are common to the groups. In this way the structural nature of the identity groups can be identified and future behaviour predicted.

The third general objective is to obtain an in-depth understanding of the significance of the new 'woodland manager' and 'entrepreneur' roles for defining the farming identity. As the doctrine of 'trees with everything' forms the centre of the Community Forest policy, emphasis is placed on investigating the symbolic significance of woodland for the farming identity, i.e. how woodland conflicts with existing symbols of farmer identity. In addition, an understanding is required of how diversification roles are perceived within the farming culture - specifically, (a) how they contribute to or detract from the ability to view oneself as a farmer and (b) whether farmers of particular cultural types select particular forms of diversification. Overall, the investigation is looking to establish whether farmers from different identity groups are likely to respond differently to role-changes proposed by the Community Forest scheme.

To achieve these objectives a combination of quantitative and qualitative research techniques was employed. Quantitative approaches are acknowledged as suited for testing explicitly formulated theories and in the investigation of structural elements (Bryman, 1988). Therefore, while a subjective approach can be used to sort farmers into specific theoretical identity groups (e.g. Shucksmith, 1993), a quantitative approach is preferred. In addition, the quantitative methodology is of greater appeal to institutions involved in monitoring the success of agri-environmental schemes and, as Cloke *et al.* (1997) observe, methodological procedure is increasingly dictated by the requirements of the funding body. Developing quantitative approaches to investigate farmer response 'types' (of great interest in agri-environmental schemes, e.g. Morris & Potter, 1995; Batershill & Gilg, 1996; Wilson, 1996, 1997) may thus be of greater practical value for future research.

In contrast, qualitative research is generally associated with the generation of theory (Bryman, 1988: P122) and its flexibility renders it more adept at uncovering meaning than the quantitative approach (Mason, 1994). Therefore, to understand the meanings associated with being a 'farmer' and how these perceptions may conflict with the new post-productivist role for farmers, a qualitative approach was employed. In this case, as little research had previously been conducted into the social significance of woodland, the research process was directed at generating theory, rather than testing a pre-

determined hypothesis. In combining qualitative and quantitative investigation in this way the study aims to exploit the strengths of both methodological approaches - recognised as of potentially increasingly importance for the future development of human geography (Philo, 1993; Cloke, 1997; Philip 1998).

1.6 Summary of Chapters

The study reported here revolves around a census survey using a combined quantitative/qualitative approach of 60 farmers within the Marston Vale Community Forest zone and a follow up qualitative survey of 13 farmers. The thesis itself is structured as follows:

Chapter 1: Introduction - This chapter introduces the concept of Community Forests, the issue of how cultural factors may provide resistance to the new roles for farmers suggested by the Community Forest scheme, and the concept of using an identity-based theoretical framework for investigating the issue.

Chapter 2: Farmer identity in crisis: the changing role of farming in society - Chapter two discusses the effects of recent changes in agriculture on farmer self-identity. The Community Forest scheme is located within the context of political and economic changes to agriculture on the national, European and global scales. The chapter centres on how the need to restructure agriculture and the farming role is leading to a crisis of farmer identity, and how the then Conservative government in the UK devised the Community Forest scheme in part as a means of converting subsidy-dependent farmers to independent entrepreneurs.

Chapter 3: Community forests: the farmer response - Chapter three comprises a literature review outlining the success of the Community Forests to date. It briefly examines farm diversification in the UK and discusses the reasons why the uptake of diversification has been relatively slow. The discussion then progresses to investigate possible reasons for a slow uptake of the Community Forest scheme, concentrating on farmers' concerns for the establishment of woodland on agricultural land. Finally, the

issue of possible social or identity-based resistance to the new farming roles is introduced.

Chapter 4: Integrating identity into agricultural geography: development of a conceptual framework - After establishing the need for an investigation into the influence of self-identity on agricultural decision-making, chapter four sets about developing a conceptual framework for investigating the issue. It examines the advantages of a cultural approach over the more common attitudinal or 'satisficing' studies and forwards evidence that there may be a number of sub-cultures within the farming community based on their preferred role as a farmer. The chapter then discusses previous research where an identity-based approach has been employed. A proposed conceptual framework based around the principles of Stryker's (1968) *identity theory* is discussed, and a model of the framework presented.

Chapter 5: Methodology: investigating farmer identity in the Marston Vale - Chapter five establishes the manner in which the conceptual framework is to be operationalised. It outlines the procedures used to develop the psychometric measures used in the study (in particular the *role-behaviour index*), describes the development of the main questionnaire survey (60 farmers) used in the Vale, and details the administration of the questionnaire. Next it describes the approach used to analyse the quantitative data obtained from the questionnaire. The final section of this chapter describes the qualitative procedures used for the in-depth investigation of farmer identity in Marston Vale (13 farmers).

Chapter 6: Farming in the Marston Vale: a descriptive account - This chapter presents a general picture of farming in Marston Vale. Results from the main farmer survey are summarised and presented in a series of graphs and tables to provide background information to aid in interpreting the following chapters.

Chapter 7: Farmer role-identity at the sub-culture level: implications for decision-making - Chapter seven presents the quantitative analysis of the *role-behaviour index* used to group farmers into possible sub-culture or 'identity' groups. A principal components analysis is used to detect role-strategies from the index and a cluster

analysis conducted using Ward's method to define the farmer clusters. These are then labelled through testing for between group differences with the factor scores (matching the role-strategies to the groups) and investigated for external validity by testing for between group differences with independent variables that should theoretically (from the literature) be associated with the various identity groups. Clusters are then tested against identity commitment and salience indices to provide evidence that they have meaning to the farmers themselves and therefore may be said to represent role-defined identity groups. Finally, the implications of the findings for the adoption of the Community Forest scheme are discussed.

Chapter 8: The conflict between current farmer identity and the establishment of commercial woodlands - This chapter examines (through the qualitative investigation) the symbolic significance of woodland for the general farming culture through comparing the social significance of woodland to that of existing agricultural produce. To this end, the chapter is divided into two main areas, namely; (a) an investigation into the significance of crops and livestock and the role-behaviours required to establish the farmer as a 'good farmer', and (b) how woodland may interfere with the established role performances required to obtain status as a 'good farmer' and satisfaction from farming - as well as the actual symbolic value of woodland to the farmer. Overall the chapter considers how woodland planting may interfere with the role of the farmer and, consequently, the farmer's self-identity. Potential differences in approach by the sub-culture identity groups are also investigated and discussed where they emerge.

Chapter 9: The effect of farmer identity on diversification - Chapter nine observes the effect farmer self-identity may have on the uptake of farm diversification schemes. Results are analysed to establish at what stage of diversification a farmer may cease to be seen as a farmer by his/her social group, and how this may affect the choice of diversification enterprise. In addition, the role of identity conflict between the general public and the farming community in reducing farmers' willingness to participate in leisure provision and public access schemes is discussed. A new classification for diversification schemes on the basis of the degree of movement away from the 'farmer' role is proposed and tested using a largely quantitative analysis.

Chapter 10: Conclusions - In this chapter the main results of the study are summarised and an appraisal of the success of the identity approach made. Recommendations for future investigations using similar methodologies are presented, and the chapter concludes with a brief prediction of the future development of the Marston Vale Community Forest.

Chapter 2: Farmer identity at a time of crisis: the changing role of farming in society

2.1 Introduction

The late-1980s were critical years for the farming industry in the UK. A generous subsidy system that rewarded farmers for increased production had established a lengthy tradition centred around the ethos of increasing agricultural production. This led to an industry based on intensification and expansion, limited in its flexibility to adapt to the changing socio-economic environment, and heavily reliant on government subsidies. A global 'farm economic crisis' in the 1980s saw slumping prices for agricultural produce and consequently the accumulation of large surpluses within the European Union. The existing system of subsidies provided through the *Common Agricultural Policy* (CAP) were becoming financially unsustainable. At the same time farm incomes decreased rapidly, more than halving between the mid-1970s and the mid-1980s (Clark, 1991) and threatening radical social and environmental change within rural communities. Thus, it became apparent that a major economic restructuring of the agricultural industry was required. In particular, it was recognised by policy makers in the late-1980s that the farming culture needed to be diverted from its productivist approach to become more responsive to market forces. This was the environment which led to the establishment of the Community Forest scheme.

This review chapter presents an interpretation of the political, economic and social events that led to the then Conservative government establishing the Community Forest scheme in 1989.¹ The suggestion is forwarded that the agricultural crisis is being accompanied by a crisis in farmer identity as farmers are forced to diversify the traditional farming role and reconsider their position within society. Thus, the Community Forest scheme (based on the principle of volunteerism) is meeting

¹ Note that in late-1997 the new Labour government had yet to noticeably alter the approach of the Conservatives to the countryside, particularly on conservation issues (O'Riordon, 1997).

resistance from sections of the farming culture that do not view woodland as a land-use compatible with their identity as a farmer.

2.2 Restructuring of the global economy

The global economy is changing, and with it the nature of society and identity - both rural and urban. In particular, over the last two decades a new form of production has emerged, that of *flexible accumulation* - based on the requirement that markets and producers be flexible with respect to labour processes, labour markets, products and patterns of consumption (Harvey, 1989). As a result, workers and businesses can no longer expect continuity, but rather require a more multi-tasking approach to employment (Beck, 1992; Lash & Urry, 1994). Accompanying this paradigm shift in employment practices has been the rise of what Beck (1992) terms the *risk society*, where individual security in the workplace is reduced, resulting in the progressive dilution of traditional roles. Beck refers to this process as 'disembedding' and proposes that, as the post-modern society develops and traditional security is lost, a process of 're-embedding' (reintegration into the new society) is required.

This process of disembedding/re-embedding is generally centred around work roles. As is commonly surmised, occupation provides an important focal point around which individuals structure their lives (e.g. Gordon, 1976; Davis & Lofquist, 1984; Darques, 1988). Repetition of work roles leads to the development of skills which then become a source of self-esteem around which an individual may structure his/her identity. However, as Beck (1992) points out, for the majority of people in capitalist society occupation no longer provides the level of security it did in the past. One of the most influential social theorists of the 1980s and 1990s, Anthony Giddens (1991: P33), surmises that, in this new society, self-identity is no longer "clearly staked out" but has become a reflexively organised endeavour in which the individual must sustain a "coherent, yet continually revised, biographical narrative" (P5). In the past the farming community has been sheltered from the 'risk society' by fortune of being one of the few industries still receiving substantial government support and, consequently, a guaranteed income. However, recent changes in the subsidy system due to the CAP reform and implementation of the GATT agreement threaten to expose farmers to the same market

forces that have shaped the manufacturing and service industries. With these changes *will* go the former assurances of identity and tradition that the farming profession has offered since the Second World War. For, as Higgins & Seabrook (1986: P14) suggest, “Contemporary agriculture, shrouded in a cloak of uncertainty, is under political and economic pressure to develop flexibility in order to adapt.”

2.3 Restructuring of agriculture in Europe and the UK

2.3.1 **The farm agricultural crisis and the reassessment of CAP in the 1980s**

While their market and income were guaranteed farmers had no need to adapt to the new flexible order and the uncertainties it provided. However, the emergence of the global ‘farm economic crisis’ in the 1980s saw a slump in farm incomes, and an accumulation of surpluses that threatened to bankrupt the subsidy system. By the mid-1980s, because of the massive surpluses being generated, it was apparent that the existing system of supporting farmers required substantial revision (Slee, 1987). The essential problem was not that the CAP had failed, but rather that it had been too successful in achieving some of its objectives - specifically those pertaining to agricultural production. When established by the Treaty of Rome in 1957 the CAP was intended to meet economic (market stability), production (increased agricultural production and reliable supplies) and social objectives (support for the rural community and supplies at reasonable prices to consumers). However, through weighting the payments heavily on ‘production’ aspects of agriculture the system created a ‘productivist’ ethos, i.e. “A commitment [by farmers] to an intensive, industrially driven and expansionist agriculture with state support based primarily on output and increased productivity” (Lowe *et al.*, 1993: P206). This mode of production had a number of negative effects on the competitiveness of the farming industry. In particular, through offering farmers a guaranteed income the importance of diversifying to lower financial risk was diminished (Commins, 1990), land prices were dramatically increased - thus reducing the transfer of land to alternative land-uses such as forestry and leading to conflict between agricultural and environmental objectives (Mather, 1992), and, as the subsidies were not subject to means-testing, they supported the agglomeration of land and capital into large

enterprises - encouraging the commercial agribusiness approach (Whatmore *et al.*, 1987a).

Thus, as a result, the CAP in the 1980s was (a) encouraging farmers to increase their dependency on agricultural subsidies, (b) generating unwanted surpluses courtesy of the unwitting sponsorship of the wider European public, (c) leading to higher food prices in the supermarkets, (d) facilitating environmental damage through the utilisation of marginal land for production and the over-use of production-enhancing chemicals, and, (e) despite the enormous financial cost, failing to meet the social objectives of maintaining the artisanal system of farming. At the same time, demand for agricultural produce was either stable or falling while output continued to rise - with the result that an unsustainable proportion of the European Union budget was being spent on production and export subsidies for the farming industry such that expenditure threatened to eventually exceed the budgetary resources available (Munton *et al.*, 1989; Neville-Rolfe, 1989; Commins, 1990). This led to a “period of uncertainty” in European agriculture in the late-1980s, when policy-makers sought solutions to the problems of agricultural surpluses and budgetary over-runs that would also take into account social and environmental concerns (*Commission of the European Communities* (CEC), 1993: P2).

While withdrawing (or dramatically reducing) the price support mechanisms would immediately resolve the funding crisis, the commensurate economic and social effects on rural communities, and in particular the small family farmers, were potentially devastating. Blunden and Curry (1988: P37) summarise the dilemma facing the European Union policy makers as:

“The deep price cuts which would be necessary to provoke a ‘supply response’ from the largest and most efficient producers, who account for the bulk of the over-production, will at the same time threaten the survival of smaller and more marginal farmers. There can be little doubt that a reduction in farm support would cause genuine hardship for many individual farmers, particularly those who have borrowed heavily in recent years to finance investment.”

Removing subsidies, and thereby support for marginal farm businesses, would have almost immediate effects on both the environment and rural communities as poorer areas of farmland were either abandoned or farms were accumulated into still larger commercial enterprises. There was no political desire for a solution of this nature for three main reasons. First, the implications of such a move would be intolerable to the farming lobby, regarded by politicians as an organisation of “very tough and able political animals” (Gilg, 1991: P78). Secondly, the Europe wide rural population - much of which is dependent on the continued remittance of subsidies for survival - still accounts for almost half the population of the European Union (CEC, 1993). Thus the social effects would be widespread. Thirdly, the damage to the countryside resulting from increased commercialisation of agriculture and abandonment of poorer areas with potentially high cultural value would have been intolerable to an urban population expressing, at the time, extremely high levels of concern for the environment (O’Riordon, 1990).

The European Union’s initial solution to reduce agricultural support and surpluses without damaging the rural economy was to encourage farmers to voluntarily diversify their businesses, to retire from farming, or turn agricultural land to alternative uses - in particular 1988 saw the introduction of the set-aside scheme (CEC, 1988; Boucher *et al.*, 1991). As part of this approach the CEC (1988: P45) suggests ‘community forestry’ as a policy for the development of rural society, adding that, in areas where conservation of the environment, creation of job opportunities, and the social and recreational function of woodlands are important, “the Community must now make a major effort to promote the development of forestry.” The initial voluntary measures proved insufficient and consequently reforms of the CAP were introduced by the Council of Ministers on 21 May 1992 (the MacSharry Reforms). These covered three main areas; a reduction in the prices of agricultural products; compensation through premiums not related to the quantities produced; and the control of production by limiting the factors of production (for example, the set-aside of arable land - see Appendix ii). In addition to these market measures, the CAP reform also contained accompanying measures. These included a strengthening of environmental protection of the countryside and measures to promote community forestry and leisure provision (CEC, 1993: P3).

Further reforms were recently announced by the European Union on 18th March, 1998 to bring the CAP into line with the subsidy reductions agreed in the 1992 Uruguay round of the GATT agreement and further reduce the cost of the CAP (European Union, 1998a). The main points of these proposals broadly followed those outlined in the *Agenda 2000* proposals for the expansion of the European Union (CEC, 1997) and include reducing the intervention price for cereals by 20% in the year 2000 while increasing direct payments to partially cover the loss, retaining compulsory set-aside but setting the rate at zero, and cutting guaranteed prices for beef by 30% between 2000 and 2002 but fully compensating for the loss by increasing direct subsidies. In the line of rural development, agri-environmental measures will be aimed more specifically at achieving the objectives of protecting the environment and maintaining the countryside.

2.3.2 Agricultural change in the UK - the role of politics in the Community Forest scheme

In the UK, where the ideology of liberal ‘Thatcherism’² was dominant in the late-1980s, the government displayed considerable interest in voluntarily diverting farmers away from subsidised production. Government initiatives such as *Alternative Land Uses for the Rural Economy* (ALURE), launched in the Spring of 1987, sought to create an environment favourable to diversification by freeing up land-use, promoting the planting of farm woodlands and providing grant aid to diversifying farmers (Blunden and Curry, 1988). Ilbery & Stiell (1991) note that 1988 alone saw the introduction of three schemes in the UK: (1) the set-aside of arable land and extensification of production, (2) The *Ministry of Agriculture, Fisheries and Food* (MAFF) sponsored *Farm Woodland Scheme* (FWS), and (3) the *Farm Diversification Grants Scheme* (FDGS), again supported by MAFF (see Appendix ii for a description of the schemes).

However, for the nascent neo-liberal wing of the Conservative party, neither reducing subsidy levels nor shifting emphasis from subsidising agricultural production to subsidies and grants based on alternative land-uses (in particular set-aside) were sufficient. With an unfaltering belief in the “morality of the market” (Lowe & Flynn,

² Defined by Shucksmith and Winter (1990: P249) as resting on “... monetarist macro-economic policies, a laissez-faire role for the state which required the privatisation of state enterprises, deregulation of markets, and individual ownership of property.”

1989: P22) the neo-liberal Conservatives contended that farmers had to be fully integrated into the free market as farming represented, “an example of an industry that has bloated itself at the government’s expense” (Slee, 1987: P14). In addition, agri-environmental subsidy schemes (such as the *Environmentally Sensitive Areas* (ESA) scheme) simply involve the transfer of property rights to the state (Whitby *et al.*, 1996), a move out of step with the liberal ethos of minimising government intervention. At that stage the Conservative Party consisted of two ideologically opposed factions of approximately equal strength - the neo-liberals and the more traditional Tory paternalists (or one-nation Conservatives) who generally represented Conservative shire interests.

Shire interests are centred around the preservation of the countryside itself. At the heart of the countryside, representing the ideal social unit, is the family farm - the form of which is immortalised in sociological literature as the base unit of Tönnies (1974) caring ‘Gemeinschaft’ society. Whatmore *et al.* (1991) surmise that small-scale family farming represents vastly more than a simple form of production, but has extended itself into a position of symbolic significance to the ‘rural’, merging into the landscape and “becoming part of the object preserved and consumed as ‘heritage’ by society at large” (P9). This symbolic value has been recognised in the ideological commitment of the state. As family farming represents an integral part of the culture of Britain, the traditional Conservative ethos is particularly adept at preserving this form of management (Marsden *et al.*, 1989). As a result, rural policy has in the past been, “more receptive to the traditional shire Tory interests” (Boucher & Flynn, 1991: P123), creating a willingness to provide state support to an increasingly unprofitable farming industry.

Neo-liberal beliefs in the morality of the market are strongly at odds with the protectionist approach of the paternalistic Conservatives. In fact, the one tenuous link unifying these two ideologies was the common rejection of social democracy, rather than any ideological compatibility between the two (Gamble, 1989). Thus, within the Conservative government of the 1980s a duality of purpose emerged, with one side strongly pushing the rhetoric of enterprise and opportunity and the other encouraging the protection of traditional values, social systems and power structures. Coexistence was only possible through a double-standard - the domination of neo-liberal economic

principles in the cities and for non-agricultural industries, and, to protect the interests of the shire Tories, a countryside policy of government control and subsidy. In this coterminous development of opposing political ideologies the urban-rural transition became “something of a battleground between rival versions of Conservatism and their attitudes towards market forces” (Lowe & Flynn, 1989: P25).

In this internally conflicting political environment agricultural policy for the countryside needed to (a) ultimately result in farmers’ complete independence from government subsidies and subsequent integration into the free market as independent businessmen, and (b) offer complete protection for the existing agricultural way of life such that farmers could maintain their life-styles and the countryside its character. A situation of no change was unacceptable to both parties as subsidy-driven agriculture in the UK was already encouraging concentration of agriculture into larger and fewer units³, leaving family farmers comprising a decreasing proportion of farm businesses and their long term sustainability in doubt. The difficulties faced by family farmers were pointed out by Marsden *et al.* (1989: P12) who suggest, “To survive ... in today’s modern agrobusiness complex the farm family needs to be the very antithesis of its popularly held stereotype where conservatism, tradition and independence are seen as paramount.” Thus, in the late-1980s the Conservative government required a scheme that resolved these issues not simply by encouraging small scale diversification to support subsidised agriculture, but by converting the dependent and traditional farming culture into a culture of independent and enterprising entrepreneurs.

2.4 Changes in the role of farmers in the UK

Perhaps the greatest obstacle to introducing major role changes is that the protection granted to the farming industry through the subsidy system enabled a strong ‘traditional’ farming culture to develop based around productivism (Bryant, 1989). This is not to suggest that the role of the farmer has remained entirely static. However, development has been largely based around the rationalisation of the agricultural system and the introduction of new technologies to enhance production - rather than the development of

³ In 1997 the 22,000 largest UK holdings, 10.8 per cent of the total, accounted for over half of all agricultural activity (MAFF, 1998).

a more entrepreneurial approach to the farm enterprise. At the same time farmers are interacting more with external organisations - becoming increasingly reliant on outside sources of technical and financial advice (Ward & Munton, 1992) and gradually moving towards more corporate, complex business structures (Marsden, 1991). Thus, while agricultural production remains paramount, the farmer's role as a professional businessman has gradually increased. The role of the farmer has also been affected by changes in labour organisation that have seen the 'farm-wife' increasingly performing traditionally male roles (Symes, 1991).

In recent times, both the economic restructuring of the agricultural industry and the changing social needs of the wider population have placed considerable pressure on farmers to reconsider their traditional role in the world. The traditional cultural self-image as the tweedy 'farmer steward' (McEachern, 1992) caring for the countryside, selflessly providing for the local community through a gentlemanly ethic (see Newby *et al.*, 1977), and providing food for a hungry and grateful world is coming under attack from the reality that farmers have in fact occupied a position of rare privilege within British society. Now, however, the farming role is threatened with re-embedding into the new 'risk' society through exposure to market forces and, consequently, having to take greater account of the changed public expectations of the 'farmer' role.

2.4.1 Changes to the role of farmers as a result of economic pressures

As discussed above, the central cause of instability in the farming role is economic, as the expected withdrawal of financial support for agricultural products has created an environment of uncertainty for British farm businesses (Young *et al.*, 1995). Despite assurances that reform of the CAP will be conducted in a fashion to ensure that farm incomes do not decline (CEC, 1993), there seems to be little confidence in any moves to reduce direct production. For example, the president of the NFU David Naish contends that the CAP revisions may have serious implications for farming as reductions in subsidies "threaten to reduce farmers' net income substantially" (Naish, 1993: P7). This is a predictable response given the lengthy period through which the industry has depended on the subsidy system, but nonetheless the perception may have a considerable bearing on response to agricultural restructuring. The one certainty is that

to maintain their current standard of living, most farmers will need to supplement their agricultural income - thus the traditional role of the farmer as exclusively a producer of food will vanish.

Further changes may occur depending on the nature of the reforms. A particular concern is that, with the planned implementation of the 1992 Uruguay round of the GATT agreement by the year 2000 (reducing domestic support for agriculture by 20%, export subsidies by 36% and quantity of subsidised exports by 21% - European Union, 1998b), farming may have to be supported largely through non-agricultural subsidies such as extensification or conservation schemes (e.g. the Countryside Stewardship (CS) scheme or the ESA scheme - see Evans & Morris, 1997). In these schemes (as with set-aside) farmers may be subsidised to perform roles that are antithetical to the current production-oriented farming culture. As the subsidies would be particularly important for the farmers without the land area required to keep gross margins (income minus fixed costs) high but sufficient area to be able to withdraw some land from production, it is likely that medium sized farms are most likely to adopt conservationist roles.

For more commercial farmers the farming role may be altered through the effect of income reduction on the relationship between the farming industry and other components of the agricultural business. This phenomenon was observed to have occurred during the 1980s where Marsden (1991) asserts that declining income led to a number of radical alterations in the relationship between farm based production and external capital (input suppliers, credit suppliers, food processors and retailers) - resulting in greater control of farming by an oligopoly of agricultural suppliers and purchasers. This can be compared with the situation prior to the 1970s where farmers were free to select a production approach on the basis of personal preference (Morgan & Munton, 1971), thus allowing substantially greater independence. While the feeling of independence plays a vital part in the existing farming culture (e.g. Gasson, 1973; Flinn & Johnston, 1974; Kliebenstein *et al.*, 1980; Ilbery, 1983), it is difficult to see how this may be maintained without substantial changes in the farming role away from agricultural production. In the latest changes to the CAP measures have been introduced "to avoid excessive transfers of public funds to individual farmers" through discounting direct payments for farmers who receive between 100K and 200K ECU's in subsidies

by 20% and, for those who earn over 200K ECU's, by 25% (European Union, 1998a). Thus, this will discourage the trend towards public money funding the growth of agribusiness style farming.

2.4.2 Changes to the role of farmers as the result of social expectations

Recently there has been a shift in public expectations of the role of farmers, away from roles associated with agricultural use of the countryside towards consumptive roles associated with providing goods and services for the wider public (e.g. recreation and conservation) (Marsden *et al.*, 1990). Thus farmers are experiencing pressure to change their role to suit the new social expectations. Three main social roles are affected by the changing demands of the public; (1) farmers' role as food producers, (2) farmers' role as preservers of British cultural and natural heritage, and (3) farmers' role as providers of leisure facilities to the general public - particularly public access.

1) Farmers' role as agricultural producers

The traditional role of the farmer is (axiomatically) the production of food for the general population. Although this remains the most important role, it appears to have become of decreasing concern to the general public (Lyson, 1986). The reasons for this change can be speculated - there being three main possibilities:

- a) The oversupply of agricultural produce through global trading and productivity improvements has ensured a plentiful and cheap food supply without fear of shortages, thus the production role has become one that is assumed without question. For example, supermarkets throughout the UK stock farm produce such as lamb from as far away as New Zealand but presented at similar prices to local produce. In addition, as Pierce (1993) points out, dietary habits have moved away from traditional foods, thus lowering dependence on British producers. Consequently, recent decades have witnessed the progressive devaluation of the farming profession in Europe (Darques, 1989; McEachern, 1992), with farmers increasingly seen as a tax burden on society rather than as providers of food and carers for the countryside. Overproduction and environmental damage may share some responsibility for this devaluation of the agricultural producer role.

- b) The provision of considerable public subsidy to the agricultural industry has increased the expectations of some tangible return for the payments. Until recently landowners and farmers have been able to manage the land with little accountability to the public for their actions (Marsden *et al.*, 1989). However, the new Thatcher-inspired social trajectory towards self-interest (Cloke & Thrift, 1990; Ratcliffe, 1997) or the increasing counter-urban movements of the articulate middle classes may be leading people to demand more for their contributions to farming. As other roles increase in importance, the relevance of agricultural production as a farming role decreases.
- c) The decreasing public understanding of the connection between farmers and food production due to the continued growth of urban populations and their reliance on processed-food chains and supermarkets. Wholesalers and retailers are increasingly seen as the providers of food rather than farmers - with some justification as they are responsible for setting prices for agricultural products which often bear little relation to the state of the farming industry (Lyson, 1986). Because of the lack of connection between food prices and times of farmer 'crisis', farmers are often perceived as sponging off the state and "crying wolf" in order to obtain more public money (Lyson, 1986), leading to public demands for other forms of repayment.

2) *Farmers' role as conservers of the countryside*

The second role farmers are asked to perform is the conservation of the countryside. Preservation of cultural icons such as oak trees (Daniels, 1988), 'Constable' countryside, the green fields and leafy hedges of England, English wildlife, conservation sites such as SSSIs, and even the family-based artisanal production system itself (Whatmore, *et al.*, 1991), has become an increasingly important role in recent years. As the pressures of the urban society increase, the existence of the rural idyll as "an unchanging, tranquil landscape of social stability and community" (Halfacree, 1996: P51) becomes increasingly important to the urban population seeking an outlet from urban life. While farmers perceive themselves as 'stewards' of the countryside, this 'stewardship' is frequently centred around the 'farmer' defined concept of maintaining a neat and clean working agricultural landscape (see Young *et al.*, 1995). As custodians of rural space farmers are facing increasing pressure to perform the role of preservers of

English national heritage as the wider public perceives it, a role that frequently conflicts with the more business-oriented aspects of productivist farming.

Farmers are also, partially as a result of the influx of urban dwellers into the countryside, increasingly expected to keep the countryside free of environmental damage. Ward and Lowe (1994) report that an increasing awareness amongst the public of farm pollution accompanied by an increasing willingness to report the incidence to the regulatory authorities resulted in a doubling of reported farm pollution incidents in the 1980s. The preservation and conservation role has greatly increased in importance since the so-called 'environmental renaissance' (a measurable upturn in public concern about the environment that occurred throughout most western countries in the late-1980s - Long, 1991) largely as a result of the ensuing party politicisation of the environmental issue (Flynn & Lowe, 1992). Changes in regulations associated with this rise in environmental concern, such as the straw burning ban and more rigorous restrictions on farm waste handling controls, have grown to "now constitute a considerable source of business uncertainty" (Ward and Munton, 1992: P129) for farmers.

3) *Farmers as providers of consumables, leisure facilities and public access*

The third role expected of farmers is to provide the public with access to (1) specialist farm products, (2) cultural heritage by facilitating public access to farmland, and (3) leisure activities whose requirement of space or undesirable features, particularly noise pollution, makes them incompatible with urban planning requirements. Mass mobility and increased leisure time are placing increasing pressure on the farming community to provide such amenities, with the dominant concern shifting away from heritage preservation towards access and leisure provision (Glyptis, 1989). The process is compounded by the imposition of market forces on state-owned recreation facilities - particularly the sell off of Forestry Commission land and the requirement that state recreation facilities be self-financing - which is decreasing opportunities for compatible recreation in the state sector (Ravenscroft, 1993; Martin & Mason, 1993).

The increasing affluence and mobility of the urban populations have had two major impacts on the surrounding countryside. First, they have created a mobile market, so that, rather than goods having to be delivered to markets in the cities, the population now has the ability to access the markets directly, or, as McLaughlin (1992: P15) puts it, “the market has now come to the farmer.” A mobile market is essential to many on-farm diversification schemes, particularly those associated with leisure provision, and will be crucial to the success of Community Forests. Secondly, urban people are increasingly recognising the recreation potential of the countryside. Recreational opportunities in the countryside may be divided into ‘passive’ and ‘active’ forms of recreation. Passive recreation is the quiet enjoyment of the countryside based on both its natural beauty and/or its symbolic value as a “better physical and social world” (Harrison, 1991: P81) or “a natural way of life: of peace, innocence and simple virtue” (Stebing, 1984: P201). For active recreation, the countryside holds a different set of advantages centred around its isolation and the availability of land. This allows activities that may be considered anti-social or require spacious surroundings, such as trail-biking and hunting (Jackson, 1986). Farmers, as the self-professed custodians of the countryside, are frequently required to be the providers of both passive and active recreation for the wider public. Thus farmers are provided with the opportunity to diversify away from the agricultural production to perform the role of leisure providers.

In summary, in the late-1980s farmers were faced with increasing pressure to perform the new roles required of them by society - an outcome that would also help resolve the crisis in the CAP through reducing reliance on traditional agricultural roles. However, there were some inherent difficulties in prompting such a move. If agricultural subsidies were maintained at the existing levels farmers would have no need to perform the social and environmental roles. However, simply withdrawing the subsidies could dramatically decrease the profitability of smaller farms and lead to the dominance of the less environmentally sensitive ‘agribusiness’ commercial approach to farming (see Gilg, 1991). This outcome would have been politically unacceptable within the European Union and particularly to the shire Tory interests of the late-1980s. The only realistic alternative, from the perspective of the free market, was to attempt to engineer a change in the farming culture such that the values of productivism are supplanted with a more entrepreneurial and environmentally sensitive approach.

2.5 The Community Forest - Changing the farmer role

With the developing crisis in the CAP of the late-1980s, the Conservative government was searching for ideologically sound ways to maintain farmers' incomes (shire interests) while reducing their dependence on the state (neo-liberal interests). In much of agricultural Britain opportunities for diversification are limited by the lack of a market in close proximity. However, farmers in the urban fringe have a ready market for both value-added farm goods and countryside recreation activities, with the public willing to pay for the use of farm-based leisure facilities (e.g. Maxwell, 1994). The Conservative government was intent in its efforts to convert farmers to leisure-providing, forestry-oriented entrepreneurs (Hodge, 1996) - and the urban fringe zone presented an ideal opportunity for engineering this new independent approach to farming. Hence the Community Forest scheme was born.

The plan for a series of urban-fringe forests announced in July 1989 (Wagner & Nicholson, 1990) was not solely based around the need to reduce agricultural production or supply leisure facilities for the (largely Tory voting⁴) middle classes. The schemes were announced at a time when global environmental issues were of great concern according to opinion polls (O'Riordon, 1990; DoE, 1993) and Conservative credibility on the environment extremely low. This was partially due to their lack of emphasis on so-called 'taxes on industry' such as any compulsion to regenerate areas despoiled by industrial activity. The decline of industry in Britain over the previous twenty years, and the general lack of environmental constraints placed on industry during the Thatcher era, left much of Britain's urban fringe areas in a state of disrepair and in need of environmental rejuvenation. On a more global level, the then government had been guilty of obvious procrastination on major environmental issues such as the greenhouse effect and ozone depletion (Flynn & Lowe, 1992).

While the attainment of 'green' credentials was unsurprisingly never announced as an objective of Community Forests, analysing the response in the context of Downs' (1972) 'issue attention cycle' strongly suggests Community Forests were seen as the soft

⁴ Growing use of the countryside for recreation purposes and farm holidays as well as the accelerating process of counter-urbanisation (Adams, 1996) has predominantly favoured affluent middle class interests rather than those of the working classes (see Harrison, 1991; Lowe *et al.*, 1993).

(cheap) option to serious environmental regulation⁵. The 'issue attention cycle' postulates that if a government is seen to be taking action public concern is immediately lessened as responsibility has been passed on to the 'appropriate' authorities. Public attention is then focused on a different issue, allowing the government to renege. A publicised government move towards dealing with any environmental issue results in decreasing public concern and consequently reduces pressure to deal with other, more serious (and expensive) environmental problems such as the ozone and greenhouse issues⁶. For example, Flynn & Lowe (1992) argue that the ESA scheme was one of the first alterations of agricultural policy initiated to attempt to diffuse the rapid increase in popular support for the conservation movement. There can be little doubt from the initial enthusiastic response to the Community Forests (e.g. *Countryside Commission* (CC) News, 1990a and b) that the scheme contributed greatly to the government's 'green' credentials by providing evidence of affirmative environmental action.

An additional concern for the government that may be resolved by the establishment of Community Forests was the increasing expense of importing timber from overseas due to a lack of a local industry. At present Britain is one of the least-forested nations in Europe, having a coverage of just 10% as compared with the European average of 25% (Wagner & Nicholson, 1990; Watkins, 1992; Taylor, 1993). As a consequence, Britain is forced to import over 90% of its timber, leading to substantial import bills - around £6 billion in 1988 (Blunden & Curry, 1988). The Countryside and Forestry Commissions envisage that Community Forests will provide both a commercial timber crop and, at the

⁵ The use of environmental/conservation schemes to reach political objectives is not necessarily restricted to the Community Forests. In 1982 Michael Heseltine, then Secretary of State for the Environment, altered proposals for a urban-fringe improvement project - the Groundwork scheme - to bring the operation more into line with Conservative philosophy by advocating a greater role for the private sector and the 'community', rather than the public sector (Collis, 1990; McQueen, 1993). Flynn and Lowe (1992) suggest that Heseltine had focused on the protection of the rural environment as an area of dissent in Conservative ranks and consequently was using the issue to further his leadership ambitions, by developing an alternative to Thatcherism.

⁶ The Conservative government suggested to the public that Community Forests will have a beneficial effect on global warming by reducing Britain's carbon surplus (Wagner & Nicholson, 1990; Countryside Commission, 1990). However, the total area zoned for forests compared to carbon emission levels in Britain is relatively small, rendering any carbon sequestering effect insignificant. Taylor (1995) suggests that the planting of 1 million ha of conservation grade forests could account for a total of only 4% of the total UK emissions. Using this figure, even if all of the Community Forest zones (450,000 ha total; Counsell, 1995) were planted with conservation grade forests with the maximum desirable planting coverage of two thirds, this would account for only 1 % of Britain's current carbon emissions. A more realistic figure may be in the order of 0.1 - 0.2 % when the forests are accumulating carbon at a maximum rate, given a more realistic cover rate of 15% and the variety of forest types. This is assuming the unlikely scenario that CO₂ emissions do not continue to increase.

same time, form the basis for the development of local craft industries and other rural enterprises, thus contributing to the vitality of rural communities. Plantings that may return a profit in a shorter time-frame than trees are also encouraged - for example, Christmas trees or biomass for energy production (CC, 1990, 1991). While there is much publicity given to the conservation value of the Community Forests, the commercial forestry objective is of at least equal importance. This was highlighted by the changes introduced to the *Farm Woodland Premium Scheme* (FWPS) in 1994 (the main subsidy grant for encouraging Community Forest participation that replaced the FWS at the end of its trial period in 1991 (Slee, 1987) - see Appendix ii). The new measures increased the density of planting required to qualify for grant payments - thus decreasing the leisure⁷ and conservation value of the woodlands (Pearce, 1994).

In this way the Community Forest scheme may indeed be termed a 'multipurpose forest' - not only in terms of *land-use within the zones* (as suggested by the Countryside Commission, 1990), but also in terms of the political, economic and social objectives of the scheme. These objectives include:

- Reduction in the dependence on overseas timber and hence balance of trade deficit
- Provision of 'green credentials' for the then Conservative government
- Provision of cheap 'community based' environmental improvements for industry
- Provision of recreation and leisure facilities for the increasingly mobile middle classes
- Economic revitalisation of urban fringe communities
- Reduction of farmers' reliance on agricultural subsidies

All of these objectives were to be achieved with a minimum of financial assistance from the public purse (e.g. the MVCF project received only £260,000 in 1997 - MVCF, 1997), and no 'taxes on industry'. Rather, the scheme was to be implemented largely through the voluntary⁸ diversification of land-use by the incumbent farming community using the existing grant system and, instead of costing money, was to generate substantial economic benefits. For example, a DoE press release of 28th May (1995)

⁷ See Schroeder (1986) or Sommer & Summit (1995) re the ideal aesthetic form of woodland.

⁸ During the Conservative years the "voluntary principle" was enunciated *ad nauseam* "as sacred gospel by ministers, to be observed in dealings with rural interests" (Ratcliffe, 1997: P3).

states that, at least for the Watling Chase Community Forest, the government expected to create £80 million in benefits from its £20 million investment. The Community Forest scheme was thus conceived from an implausible fusion of neo-liberal and paternalistic Conservatism, where a series of potentially expensive problems (if dealt with through public investment) were to be turned into a project that would not only cost little to implement, but generate considerable economic and social benefits for the shire interests. The difficulty was in convincing the farming community to abandon traditional farming roles, voluntarily adopt new entrepreneurial roles, give up the security of subsidised income, plant substantial areas of woodland and actively encourage public access to farmland. Hence the Community Forest project teams were established to publicise the scheme and act as co-ordinating bodies for farmers and other so-called 'communities of interest' (CC, 1990) involved.

It is at this point that gaps in the theory behind Community Forestry emerge. The essence of the Community Forest scheme, despite its grandiose title and laudable social, economic and environmental objectives, has been accurately described by Lloyd *et al.* (1995: P362) as "little more than designated areas in which private landowners are encouraged to plant more woodland, although little financial incentive is offered for doing so." In devising the Community Forest scheme there has been a questionable assumption made that farmers will voluntarily accept the role of entrepreneurs and undergo the other social changes required for the success of the scheme without tangible economic incentive (Hodge, 1996). Perhaps this optimistic approach resulted from the prevalent Thatcherite dogma within the Conservative party that entrepreneurialism was good and that, therefore, all people would want to become entrepreneurs if provided with the opportunity and encouragement. In addition, it may have been assumed that farmers were looking for a means of supplementing their agricultural income as it was apparent (even NFU forecasts were predicting) that farm incomes were likely to decrease dramatically (e.g. MVCF, 1992). The vital element that appears to have been left out of the equation was any anticipation of cultural resistance to role changes, particularly towards planting woodlands on agricultural ground (e.g. Bullock *et al.*, 1994; Selby & Petäjistö, 1995) and permitting unfettered public access. Farmers (in general) simply want to be left alone to continue as agricultural producers (Halliday, 1989; Ilbery & Bowler, 1993).

Changing the role of the farmer is not simply a matter of altering behavioural patterns. As mentioned above in reference to the global identity crisis, occupation often forms the focal point around which people structure both their social arrangements and their self-identity. It provides them with a sense of self-worth and satisfaction and is consequently strongly tied up with their psychological and emotional well being. The contention is thus forwarded that the agricultural crisis and restructuring in the UK is leading to a second crisis, one of farmer self-identity⁹, as long held traditional roles and values associated with production are adjusted into line with the European Union emphasis on the free market, the environment and preservation of the countryside (Bremner & Hornsby, 1998). At the moment, farmers comprise a highly traditional community (Bryant, 1989) reliant on industrial forms of production, but located within modernity's "post-traditional order" (Giddens, 1991: P2) where flexibility is a necessary survival tool. Adopting the new roles required inevitably means abandoning aspects of the old farming role as diversification leads to clashes over the allocation of time and resources on the farm (Gasson, *et al.*, 1988).

In addition to the requirements for structural changes on the farm, the farming identity must adapt to the changing social environment as the public's needs move away from the demand for food, to environmental protection, leisure facilities and countryside heritage. Farmers are increasingly unable to justify their 'vital' role in society as food producers due to the globalisation of the world economy (and hence agriculture) and need to establish a new sense of self-worth. This process of asserting the self-worth of the countryside traditions relative to urban aspirations has been demonstrated in the recent occurrence (1997 and 1998) of the 'Countryside' marches in London. While these were focused by the pro-hunting lobby, the diverse range of interest groups involved in the protests appeared to reflect a general feeling of alienation within countryside communities.

⁹ While reference is made to a generic 'identity crisis' there is some degree of regional distribution. As Marsden *et al.* (1993: P63) point out, "crises arise from unresolved steering problems," thus for areas where there is little choice of alternative farming practices or limited markets for diversified produce - i.e. no 'steering' options - the impact of the agricultural crisis on identity may be lessened (although economic problems may be as, if not, more intense). Likewise, for farmers who already consider diversification to be a standard and acceptable form of income supplement, there is no unresolved choice and therefore they may be less seriously affected than older, more traditional farmers.

This identity crisis is more evident in economies where systems of production are more traditional than the relatively efficient agriculture of the UK - in particular, peasant agriculture in France. Darques (1988: P289) notes that the devaluation of the agricultural profession in France is responsible for the current redefinition of male-female relations that "is indicative of a double identity crisis: a crisis of farmer identity and a crisis of female identity." Similarly, Hervieu (1991: P298), in noting the need to redefine the role of the farmer, suggests that French farming is experiencing an 'unfinished revolution' where the peasant farmers have been turned into entrepreneurs but without a 'frame of reference' to either providing services other than the production of farm produce or strategies aimed at preserving natural heritage. It is the development of this 'frame of reference' or, to use Beck's (1992) phraseology, the 're-embedding' process, that will dominate European farming over the next decade and may have profound implications for the future success of the Community Forest.

2.6 Conclusion and summary

This chapter has looked at how the agricultural crisis of the 1980s has led to a need to reform the existing structure of agriculture in Europe and how the changes in farmer role required are leading to a crisis in farmer identity. Community Forests, as announced by the Conservative government in 1989, are intended to encourage the reintegration of farming into the mainstream economy as well as meeting timber production and environmental objectives. Farmers, however, have a long tradition of agricultural productivism that has become part of the farming culture and may play an important role in maintaining their self-identity or self-worth as farmers. Thus the Community Forest is likely to succeed only to the extent that the new roles are compatible with the existing farming culture - or the farming culture changes to adopt these new roles. To investigate this aspect, the following chapter reviews the response of the farming community to the opportunities provided by diversification and, more importantly, social and economic issues surrounding the establishment of farm woodland.

Chapter 3: Community Forests - the farmer response

3.1 Introduction

This review chapter begins by examining the development of Community Forests in the nine years since their inception. As the Community Forest scheme is essentially aimed at encouraging farmers to diversify away from agricultural production, a discussion is then developed on the overall pattern of diversification adoption in the UK. Following this a more in-depth discussion on factors influencing farmer participation in the woodland planting in general, and the Community Forest scheme specifically, is presented. Adoption appears to be influenced by three main factors, namely; (1) economic factors such as the profitability of trees, the subsidies offered by the agricultural support mechanisms, and the temporal distribution of returns; (2) management and tenure factors - in other words, restrictions placed on land use by external organisations and capital requirements, and (3) socio-psychological and historical factors, such as the cultural traditions of farming, attitudinal resistance to public access and farmer self-identity.

The chapter then investigates whether the lack of farmer enthusiasm is attributable to either economics and restrictions or psycho-sociological factors such as attitudes, culture and identity. It concludes that, while the economics of farm woodland do not favour its establishment, there is strong evidence in the literature to suggest that farmers do not see forestry as part of farming, and would simply like to be left alone as 'farmers' (e.g. Bishop, 1990; Williams *et al.*, 1994). The scale of change in the farming role that is required for Community Forest participation demands not only a change in behaviour, but also a change in the farming culture. Included in the Chapter are the results of a postal questionnaire of Community Forest Project Managers in October, 1995 (see Appendix iii) conducted as part of this study. All quotations from Community Forest directors are from this source.

3.2 Community Forests so far

To date the establishment of the government's new community woodland schemes (the 'National' or 'Midlands' Forest and 'Community Forests') has been disappointing. The Midlands Forest, the first of the projects to be established, was officially launched in 1991 with the intention of turning an area of low quality farmland into a 'working forest' covering 194 square kilometres. Project targets were set at 30 million trees covering one third of the land, with two thirds of the planting to be completed by 2001. However, by 1994 only half a million trees had been planted, 20% by the Department of Transport on roadside verges (Pearce, 1994). Assuming this rate of adoption continues, it will take the forest 40 years to reach the planting level targeted for 2001. If, as is potentially the case, a selectivity effect is occurring and the areas planted using FWPS grants are those long earmarked for woodland anyway (observed by Potter *et al.*, 1991; Ilbery, 1992; Ilbery & Kidd, 1992; Williams *et al.*, 1994), the target plantings of 20 million trees may be even further off. By 1995 the Midlands Forest reported total plantings still accounting for only 3% of the intended 2001 target (Steele, 1995), well below predicted response levels. As far as community involvement is concerned, Bell & Evans (1998: P249) suggest that, despite Countryside Commission reports of great enthusiasm in 1994, by 1997 it is apparent that the vision of sustainable forestry in the new National Forest will not be met without "considerable conflict" among resident communities.

Community Forests appear to have fared little better. As early as 1992, three years after the announcement of the Community Forest scheme, the press was beginning to ask what had happened. Crispin Aubery of *The Guardian* posed the question "Whatever happened to the great idea for Community Forests round the country's urban fringes?" (Aubery, 1992: P19). Later, Bullock *et al.* (1994) noted a lack of applications for the *Woodland Grant Scheme* (WGS) and FWPS from the forest areas, and concluded from this that the success of the Community Forest scheme had been 'limited'. This reflects a nation-wide trend of a "consistently poor" uptake of the WGS (Evans & Morris, 1997: P193). Williams *et al.* (1994) suggested that the Greenwood Community Forest scheme does not yet appear to have encouraged farmers to plant on their arable land, and noted

that reports produced by the Cleveland Community Forest, the Great Western Community Forest, the Great North Forest and the Mersey Community Forest support these findings. They conclude; “The vision of Community Forests put forward in the late-1980s does not seem to be coming to fruition” (Williams *et al.*, 1994: P38). Of the total Community Forest area of 450, 000 ha, 1 200 ha of woodland had been created by 1994¹ (Counsell, 1995), only 40% of which (480 ha) had been planted by the private sector. Out of that Counsell notes that recreational access has been granted to only 240 ha, 0.05% of the total forest area. A similar pattern of non-adoption has been observed in the Marston Vale. In the 1997 *Fifth Annual Report* the project team reported disappointment with the response from the farming community (MVCF, 1997).

3.3 Farmers and diversification

“A main motivation in entering into the Community Forest may be the need to diversify”
(Cleveland Community Forest, 1992: P13).

While area of woodland planted offers the best measure of the success of the schemes to date, Community Forests are not simply about planting trees; they also involve encouraging farmers to use the woodland plantings to generate additional income, thus building on previous measures aimed at encouraging farmers to diversify. For example, in 1988, as part of the Europe-wide measures aimed at reducing agricultural surpluses, the British government instituted the *Farm Diversification Grant Scheme* (FDGS) to encourage farmers away from their reliance on agricultural produce while maintaining farm incomes (see Gasson, 1988; Ilbery & Stiell, 1991; Ilbery & Bowler, 1993). Altering the means of production holds both potential opportunities and constraints for the whole of rural society, and has implications for the cultural identity of the entire farming community (Hervieu, 1991).

¹ It should be noted that, although the lead forests Great North, Mercia and Thames Chase were officially opened in 1993, many of the Community Forests have only recently been granted planning permission by the DOE. Much of the time since their establishment in 1991 has been taken up preparing forest plans, which theoretically needed to be completed before any Community Forest linked plantings could begin. In reality however, as the plantings have not been dependent on specific funding from the Community Forest projects, private planting in places such as the MVCF has been encouraged since the project teams were first established.

3.3.1 Diversification in Britain

Agricultural diversification is not a recent phenomenon (Commins, 1990; De Vries, 1993). However, historically farmers have not viewed it in a particularly positive light. De Vries (1993) notes that, at the end of the 1960s, farm diversification was seen as the first step in a transition out of farming and it is this image that appears to have stuck with diversification to the present day. The image of a diversified farmer, at least up until very recently, is essentially one of a 'bad' farmer or a retired farmer (e.g. see Cherrington, 1979). In 1973 Ruth Gasson, in her seminal paper on farmers' attitudes, goals and values, found that the most important criterion by which farmers themselves defined a 'good' farmer was one who "produces the best crops or livestock," as opposed to more utilitarian values such as, "is making the most money" (P533). The farming culture today maintains these beliefs, where specialisation and amalgamation of agricultural units are perceived as positive trends (Shucksmith & Winter, 1990) and diversification is seen as "an opportunity for the physically infirm, the agriculturally inept or the socially eccentric" (Blunden & Curry, 1988: P125).

These attitudes tie in closely with social factors that may be influencing the decision to specialise in agricultural production. Coughenour (1976, 1980) notes that social processes involved in specialised commodity production play an important role in the development of social and moral values, as it is through the display of symbolically significant specialist behaviours and symbols that farmers obtain social status and prestige. As this development is dependent on role performance, diversification, in withdrawing resources from one form of production, may hinder the social development of the farmer, i.e. he/she becomes recognised by the community as a 'jack of all trades' whereas prestige is obtained through mastery of the agricultural role (Coughenour, 1976).

As a result of the predominantly productivist attitudes, the role of specialist behaviour in obtaining social status, the continued profitability of agricultural produce, and, as Coughenour (1980) reports, the greater difficulty in co-ordinating a diversified

operation, diversification occupies a fairly minor position in the overall context of the current market economy. In Britain, according to the *National Farmers Union* (NFU), only 11% of total farm incomes are earned from diversified businesses (McLaughlin, 1992), and, in general, diversification is financially unimportant to farms (Halliday, 1989; Commins, 1991). Despite this, it is widespread in Britain where 33% of farm businesses are engaged in some activity other than traditional agriculture (McLaughlin, 1992). These tend to be clustered around urban areas for the obvious reason that they are accessible to a wider market (Ilbery, 1988, 1991).

Frequently, with tourism enterprises such as Bed and Breakfast, roles are divided such that the farm wife runs the diversification project and the 'farmer' concentrates on the agricultural side of the business, dominating the management, commercial, administration and mechanised tasks (Darques, 1988). Diversification thus may simply provide a sideline activity for the wife which Clark (1991: P77) describes, "as much symbolic as directly competitive." In other words, in many cases the diversification project is not truly integrated with the agricultural role of the farmer or farm management decisions but is run as a separate business. While the farmer's time in role is not greatly affected, there can be serious implications for the farm as such ventures can make a considerable demand on the farm wife's time - thus interfering with her role as a skilled permanent reserve labour force. This may create problems with the labour supply on family farms as small farms generally have problems attracting good labour because of their inability to guarantee work or pay high wages (Marsden, 1984).

It appears that, regardless of impending changes in the *Common Agricultural Policy* (CAP) farmers still prefer to be principally agricultural producers (Shucksmith & Winter, 1990; Ilbery, 1992; Ilbery & Bowler, 1993), performing traditional farming roles rather than turning into the envisaged new generation of entrepreneurs and independent businessmen. Farmers are apparently not interested in performing the non-farming roles diversification requires. For example, in a study of the uptake of the FDGS, Ilbery and Stiell (1991) noted a preponderance of farmers adopting forms of diversification peripheral to mainstream farming, such as the provision of accommodation and other low input ventures such as 'unsupported' camping and caravanning sites. As a general rule, diversification *is* increasing in both social and

economic significance (Whatmore *et al.*, 1991; De Vries, 1993) ... but only slowly (Blunden & Curry, 1988).

3.3.2 Why the slow uptake?

As Shucksmith & Winter (1990) suggest, reasons why farmers may be slow to take up diversification schemes can be divided into two main groups - cultural factors and economic factors. First, in the case of cultural or identity factors, farmers' 'traditional' nature may affect their willingness to adopt new roles. Diversification represents a considerable move towards a new life-style which, for an occupation with long traditions often based around generations of a single family performing the same tasks on the same area of land, could represent a considerable psychological barrier for farmers. There may be additional psychological barriers associated with the perceived role of diversification schemes on the farm. Two noted in the literature are the perception that diversified farmers are failed or retired farmers (Blunden & Curry, 1988) and its common association in many (but not all) areas, with the farm wife rather than the farmer (Gasson & Winter, 1992). In both of these cases, adoption of diversification schemes may have a considerable impact on farmers' ability to maintain their self-identity as 'farmers'.

There are also a number of more pragmatic reasons for resisting diversification. In particular, having depended on agriculture for so long, many farmers simply do not have the specialised skills to operate diversification schemes and consequently may need to retrain (Slee, 1987). Currently, the skills required for diversification make it an option more accessible to the market-oriented than the production-oriented farmer (Blunden & Curry, 1988). A further factor is the distribution of opportunity. In particular, farms with existing vacant buildings (or other usable structural features) have an initial advantage over those without, and many types of diversification are dependent on the farm occupying an advantageous position relative to the prospective markets, i.e. a close proximity to urban centres (Marsden *et al.*, 1989). Clearly not all farmers are in this position. Finally, returns from agriculture are still sufficiently high that not all farmers are economically compelled to find alternative sources of income. Shucksmith and Winter (1990) point out that some farmers are currently going against the economic

climate and actually *increasing* their dependence on agriculture. This may change under the CAP revisions due for the year 2000.

In general, it can be summarised that diversification of the on-farm income base is only slowly gaining acceptance in the farming community. The insignificant proportion of farm earnings, the potential interference with the role of the spouse, the cultural association with failure, the lack of a real financial incentive to diversify, and the break it represents with farming tradition may all contribute to the lack of enthusiasm for the concept. Even when farmers do diversify not many schemes could be truly labelled as 'entrepreneurial'. Rather they tend to take advantage of either the skills farmers already possess or the opportunities provided by the existing farm infrastructure. The Project Director of the Bristol and Avon Community Forest assesses farmers as being, "generally not entrepreneurs always looking for new activities, but tend to want to get on with the job of growing/rearing things and get a decent return." The key to being an entrepreneur is in being able to identify a niche in the market and transform an idea into a marketable product or service (Kets de Vries, 1980; Bryant, 1989) and, given the certain returns from agricultural produce and the long farming traditions, it is doubtful whether farmers are even looking.

3.4 Commercial farm woodland planting: An analysis of non-adoption

While farmers display a reluctance to diversify away from agricultural production into non-farming ventures in general, their objection to diversifying into woodlands and forestry is far more intense. Thus, the target set by the Community Forest of 30% woodland (MVCF, 1995) appears substantially at odds with the amount of arable land farmers are prepared to place into deciduous woodland. Research has suggested that farmers are willing to plant only a fraction of this area on their farms. For example, Potter *et al.* (1991) asked 147 farmers from three separate areas to suggest how much arable land they would be prepared to place into deciduous woodland and at what subsidy level. The result was that, of those farmers that wished to place a bid at all (less than 50%), the average area of land they would be prepared to place into woodland was

only 3%, and the subsidy level required for the planting (assuming planting costs had already been covered) was in excess of current subsidy levels by a considerable margin.

The slower than targeted progress in establishing woodland in the Community Forests may be attributed to the lack of interest shown by the farming community to woodland planting as their participation is the key to the ultimate success of the initiative (Pitt, 1990). Tiffin (1993: P63), suggests that “farmers are not concerned with increasing or indeed preserving woodland coverage on farms, rather they are still preoccupied with agricultural production” (also see Scambler, 1989; Bishop, 1990; Williams et al, 1994). Without farmer participation, the Community Forest teams are unable to plant a single tree on a single farm, leaving the forest restricted to roadside verges, public land, and land provided in return for planning gain. The reasons for the lack of farmer response can be divided into three broad categories: economic factors, administration/management issues, and social/psychological factors. These issues are reviewed in this section.

3.4.1 Economic factors

One of the main issues with farm woodland is that it is widely regarded as a luxury item for farmers rather than as an economic resource and thus part of the farm enterprise (Gasson & Hill, 1990; Bishop, 1990,1992). There are a number of reasons farmers may not regard woodland as economically important. These centre around the lack of any recent history of planting or managing woodland as an economic resource which has left farmers without both commercial woodlands and requisite skills in woodland management. The literature suggests eight main economic factors responsible for deterring farmers from establishing woodland; (1) the poor returns obtainable from farm woodlands relative to arable crops and livestock, (2) loss of land value, (3) the level of existing grants and subsidies, (4) fluctuations in woodland subsidies relative to arable/livestock subsidies because of the exchange rate, (5) fluctuations in existing set-aside requirements and its implications for the gross profit margin, (6) lack of an established market for woodland and leisure produce, (7) economic problems with the temporal distribution of returns from forestry, (8) reforms of the CAP that may discourage woodland planting. These are dealt with on a point by point basis.

3.4.1.1 *The lack of economic profitability of farm woodlands*

In an optimistic assessment of how the Marston Vale Community Forest would develop, the *Bedfordshire County Council* (BCC) (1991b) announced in a statement that the forest would be established as the result of ‘commercial good sense’. Adding, “The commercial good sense comes from the realisation that converting derelict land or marginal farmland to woodland or recreational areas will prove worthwhile economically” (BCC, 1991a: P3). However, both Gasson & Hill (1990) and Pitt (1992) contend that available evidence indicates that forestry is not a commercially ‘sensible’ land use and that, even with the grants and subsidies included, returns are often negligible or even negative. As a consequence, there is a high opportunity cost involved in placing land in woodland (Pierce, 1993). The recently published *Rural White Paper* (DoE & MAFF, 1995) also throws doubt on the economic viability of Community Forestry, for, as Hodge (1996: P335) notes, “All of the benefits attributed to tree planting in the Rural White Paper are non-priced benefits.”

Thus, only the wealthier farmers with larger farm sizes, retiring farmers, or farmers with diversified incomes (not dependent on agriculture) can afford to plant substantial areas of woodland without risking a considerable cut in income. For the small family farmer in particular, however, studies have shown that the Community Forest proposals at present represent a singularly unattractive financial option for land-use (see studies by Bishop, 1992; MVCF, 1992; Williams *et al.*, 1994). When the government introduced the scheme it was against a backdrop of falling agricultural prices and a prospect of further cuts in the immediate future. The Marston Vale draft plan noted that figures from the NFU suggested that farm incomes would fall in real terms by 28 per cent between 1991 and 1994-5 (MVCF, 1993). Thus it was thought farmers would be increasingly willing to accept the planting grants and subsidies at the levels they were offered. In reality, net farm income in real terms over this period rose by 75% (MAFF, 1997a).

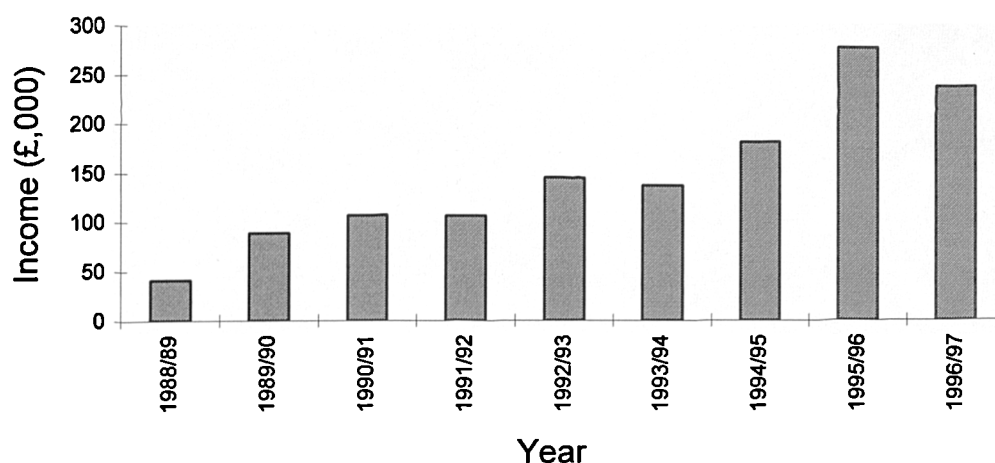


Figure 3.1: Average net farm income in real terms for UK cereal farmers (as deflated by the retail price index) since the inception of the Community Forest scheme (MAFF, 1997a).

Income from cereal farming (the dominant land use in the Marston Vale) is shown in Figure 3.1. The decline in farm incomes after 1995/96 can be attributed to a decrease in the global price for cereals as well as the strengthening of the pound. This trend appears to have continued into 1998 as preliminary results for 1997/1998 suggest a further drop of income by 40% to 1993/94 levels (MAFF, 1998). Income from cattle and dairy farms suffered similar decline. An important consideration for the future success of the Community Forest project is the effect of the year 2000 CAP reforms on agricultural incomes. Reduction of intervention prices for cereals by 20% in the year 2000, with the emphasis moved towards direct subsidies (European Union, 1998a), may push the economic balance, if not in favour of woodland, then to a point where the risk is considered financially acceptable.

3.4.1.2 *Loss of land value*

Part of the problem with establishing woodland on agricultural land is the effect it has on the commercial value of the land. The inflationary effect of the subsidy system has left agricultural land substantially more valuable than wooded land and, consequently, any farmer planting commercial woodland would immediately experience a loss in the capital value of the farm. While this difference may be balanced by the year 2000 revision of the CAP, the value of farmland can also be affected by so-called 'hope value', i.e. a value based on its potential for future use as development land. In referring

to this issue the *Advice manual for the preparation of a Community Forest plan* suggests that, for an area east of London, the existing use value of land is £3,700 per hectare, the value with 'hope value' added is £12,500 per hectare, and the value of the land with planning permission for houses or industrial development would be around £1,250,000 per hectare (Countryside Commission, 1990 - also see Pitt, 1992). This represents an increase of over 30,000 % over the existing value, with no capital expenditure. A farm enterprise such as Bed and Breakfast requires a considerable capital investment and, when functioning, can expect to offer a return on capital of only around 37 %² (Slee, 1987).

This point is raised by Macklin (1990: P29), who quotes Tim Asplin of the East Sussex NFU as saying of farmer participation in the Community Forest scheme, "I think that many farmers are hoping that their land may one day become development land. Any form of recreation doesn't produce the sort of money that houses produce." The problem with woodland is that, once established, it is very unlikely that a farmer would be granted permission to develop the land as woodlands are generally protected by planning regulations (Macklin, 1990; Pitt, 1991; Pitt, 1992; Rydin, 1993). Farmers in Marston Vale have good cause to hold on to land with hope value. The Bedfordshire County Structure Plan specifies that "major housing development in South and West Bedford" as well as in other rural areas is an acceptable land use within the Community Forest zone (BCC, 1991a: P2).

3.4.1.3 *The level of existing grants and subsidies*

Evidence suggests that participation could be enhanced by increasing the level of government subsidies. For example, Gasson & Hill (1990) found that 63% of participants in the Woodland Grant Scheme surveyed (n = 204) believe that higher grants are required to encourage more farmers to join the scheme. Similarly, Potter & Gasson (1988) and Potter *et al.* (1991), in assessing the level of payments farmers would require to participate in land diversion schemes including broadleaved woodland, found that the level of payments suggested were well in excess of the payments currently envisaged by policy makers. Farmers are clearly not attracted to woodland planting

² Slee's figures are from a survey undertaken in Less Favoured Areas.

schemes by current subsidy levels, leaving woodland planting only attractive to the more financially secure farmers. For example, a study by Ilbery (1992) on the uptake of the Farm Woodland Scheme found that all participants in the scheme (n=31) had an annual income in excess of £10,000, whereas 40% of non-participants (n=37) had incomes lower than £10,000.

In the Greenwood Community Forest, Williams *et al.* (1994) found that only one respondent out of thirty noted a grant-related motive for woodland planting, and that the same farmer believed that it would, at the same time, decrease the value of the land. When the Community Forest project directors were asked why farmers within their forests plant trees, none of the twelve respondents mentioned obtaining grants as a motive. In general, the consensus from a wide range of sources strongly suggests that the government initially needs to come up with a much improved set of economic incentives if the vision of a burgeoning private forestry industry is to be realised (Potter & Gasson, 1988; Scambler, 1989; Bishop, 1991; Pitt, 1991; Watkins, 1992; MVCF, 1992). Even so, as Hodge (1996: P335) observes, the historical evidence does not support the contention that farmers are likely to move into woodland production simply as a result of economic incentives as, “in practice it is difficult to identify any historic period when changes in agriculture [i.e. lower profit margins] have stimulated a significant expansion in woodland planting.”

3.4.1.4 *The influence of exchange rate fluctuations*

Currency exchange rates have played an important role in determining the profitability of UK agriculture. The dramatic recovery of cereal producers' income since 1992 (shown in Figure 3.1) can be attributed in part to the crash of the pound in 1992 and Britain's subsequent withdrawal from the European Exchange Rate Mechanism. As the pound decreases in value and prices for agricultural produce increase, farmers' economic incentive to plant woodland lessens. Currency fluctuations also have implications for the relative profitability of the FWPS scheme payments which are fixed in UK pounds and are not inflation adjustable. In comparison, subsidies for agricultural produce are in ECUs with the exchange rate between Sterling and ECU being regularly adjusted - thus a dramatic decrease in the value of the pound may seriously reduce the

relative profitability of FWPS payments. This inability to predict exchange rate changes is likely to restrict farmers' ability to conduct a cost/benefit analysis of woodland planting and thus act as a deterrent to large scale afforestation. If or when Britain enters the single European currency, the uncertainty of dramatic changes in the exchange rate will disappear, removing this particular economic disincentive to woodland planting.

3.4.1.5 *The uncertainty of set-aside requirements*

The setting aside of an annually varying proportion of arable land is a precondition for receiving the Arable Area Payments (provided to compensate farmers for falling subsidies under the terms of the 1992 CAP reforms - Evans & Morris, 1997). Thus it is an important issue for farmers to consider when taking further land out of production for forestry schemes. There are two main ways in which set-aside may discourage woodland planting. First, the fixed-costs involved in agriculture mean that, while larger producers may be able to absorb the loss, smaller farmers may be left with only a marginally viable area of agricultural land and cannot afford to further reduce this by planting woodland (Slee, 1987). For example, Potter & Gasson (1988) found that farmers who were concerned about reducing their farm areas while their costs remained fixed were more likely to be resistant to woodland planting. Second, the percentage of land farmers must commit to set-aside varies on the edict of the European Union according to the state of the markets. In 1993 the requirement was 15%, in 1994 - 11%, in 1995 - 10%, in 1996 - 5%, and in 1997 it returned to 10%. Thus farmers cannot be certain in any one year what proportion of their land will be out of production - and therefore cannot conduct an accurate economic appraisal of the effect of establishing a proportion of the farm in woodland. In general farmers are unwilling to take additional land out of production for forestry or other environmental purposes unless it can be counted towards the set-aside requirement (Williams *et al.*, 1994; Swales, 1994).

On June 22nd, 1995 - following intensive lobbying by the British government (Steele, 1995) - at a meeting of the European Agricultural Council permission was finally granted for farmers, in certain circumstances, to plant WGS subsidised forests on non-rotational set-aside and count the area as part of their set-aside requirements (Rutherford, 1995; MAFF, 1995b). While this concession may act as a minor incentive

to farmers considering planting, the fluctuating set-aside requirement means that farmers cannot be certain that they will receive any subsidy for the woodland as set-aside land at all. Furthermore, the announcement that set-aside in the year 2000 will be reduced to a fixed level of 0% (maintaining the instrument in case needed in the future) (European Union, 1998a) has rendered this offer somewhat farcical. Thus, for future woodland planting, the ability to count woodland as part of set-aside requirements is unlikely to have any influence on farmers' participation in the Community Forest.

3.4.1.6 The lack of a proven market for timber and leisure products

The lack of an existing commercial timber industry in the UK has meant there are limited opportunities for new local woodland produce. Both in terms of markets for woodland produce (e.g., feedstock for power generation or timber for craft industry) and leisure facilities, there are few existing markets for farm woodland produce (MVCF, 1995). The Project Director for the Forests of Mercia surmises that the main problem is "at present the existing landscape/environment of the forests is so poor that there is not a demand for the services they could provide." Here there exists a paradox. Until the forests are constructed there will be no substantial market for the produce or services, but unless there is a demonstrable market it is difficult to encourage farmers to establish farm woodland. The rapid establishment of the forests initially envisaged is unlikely to occur as this paradox will act as a brake on the planting of farm woodland.

3.4.1.7 Temporal distribution of returns

The temporal distribution of returns from woodland establishment grants, leisure incomes and timber production also creates a problem for farmers. The Assistant Project Director for the Great Western forest surmises that the "*real* reason" the Community Forest scheme is not popular is that "After FWPS payments finish at year 15 farmers receive no income from the crop until first thinnings at year 40 - Why do this when they can receive very high grain prices at the moment and high European Union subsidy?" Figure 3.2 demonstrates this graphically with a hypothetical situation for a mainly oak forest with leisure and timber potential. The figure assumes the establishment grant and planting costs more-or-less cancel each other out and management costs decrease gradually as the trees become more established (Slee, 1987). In the graph the returns are

at first dependent on subsidies (up to 15 years) then, for a period of 25 years, the forests are too small to be used for either wood products or to generate visitor income. After forty years, income can be received from the crop in the form of thinnings or diversification into leisure - but only after purchase of the infrastructure required to operate these projects.

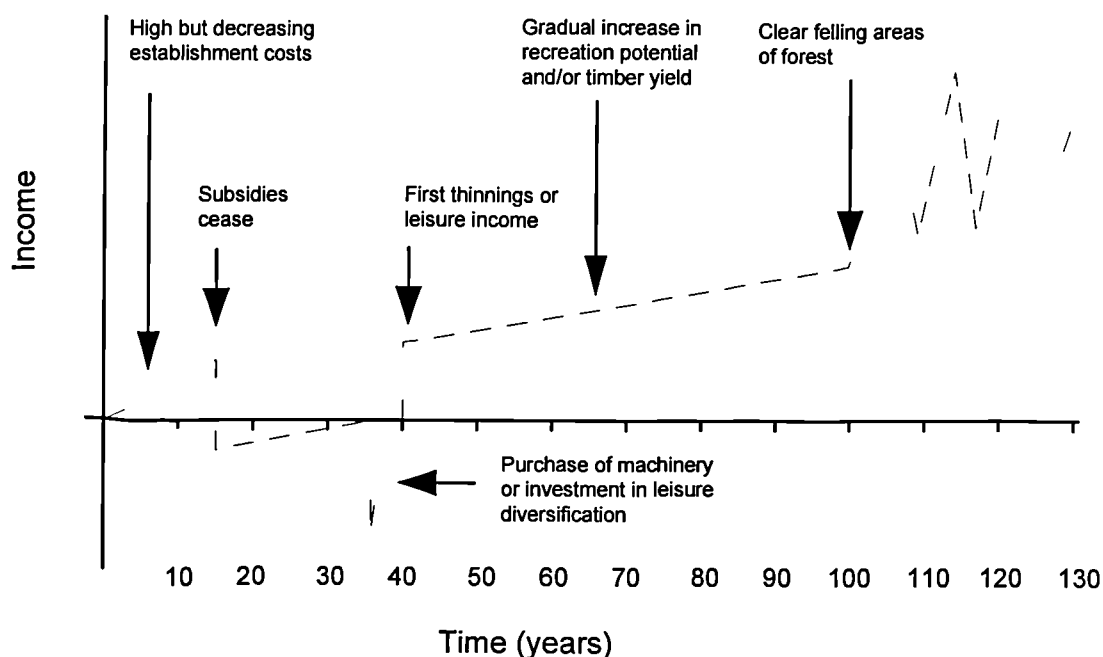


Figure 3.2: Hypothetical temporal variation in income for a predominantly oak forest assuming FWPS payments for 15 years, use for leisure or timber provision, and areas are felled after 100 years.

In the initial stages of growth, there is likely to be little or negative return from the woodland owing to the cost of establishment and the high costs of management for the first three years (Bishop, 1990). There are two points at which income may begin to be received directly from the plantings: (a) when they reach a size where thinnings may be taken and/or they develop visitor potential (for a broadleaved forest, around 30-40 years), and (b) when the trees reach a size where they may be harvested for timber (oak trees mature at around 130 years - Slee, 1987). However, prior to exploiting the leisure potential or timber a further capital investment into infrastructure would be required. The fundamental obstacle to the planting of recreation quality woodland is clearly the lack of revenue in the early years - as observed by Gasson & Hill (1990). Consequently,

it has been suggested that guaranteeing the commercial viability of broadleaved forestry would require subsidies to be available for up to 50 years (Gilg, 1991).

Problems with the temporal distribution of returns suggest that farmers will not use the FWPS grants to resolve short-term financial problems, as this would merely defer the problem for 15 years. Thus, to sustain income, farmers would need to raise enough capital from non-agricultural sources to support the woodland as a non-commercial venture for up to 25 years. This may place serious restrictions on the number of farmers who can consider commercial woodland establishment. One possible solution suggested by the Director of the Greenwood Community Forest, a forester by trade, was for diversification into agro-forestry projects such as free-range hens, upmarket fungi and horticulture (if the trees are spaced wide enough apart). However, in a financial comparison of silvoarable systems and arable agriculture, Bullock *et al.* (1994) concluded that agroforestry in Britain would not produce the level of return that either wheat or barley production provides, so that it may not solve the income gap problem.

An additional problem with the temporal distribution of returns is the long-term financial commitment and opportunity cost of establishing forests on farmland (e.g. Potter & Gasson, 1988; Bishop, 1990, 1992; MVCF, 1992; Williams *et al.*, 1994). Farmers rarely consider longer-term options unless substantial price changes are envisaged (Morgan & Munton, 1971), yet, if forestry is engaged in solely for timber production, it may take up to 130 years before a crop is fully mature. The investment therefore represents a considerable gamble as (a) demand for timber in 130 years time cannot be guaranteed (Slee, 1987) and thus no cost-benefit analysis can be conducted (Rackham, 1990) and (b) unless the farmer has a successor, there may be no real commercial benefit to planting the trees anyway. This is particularly true for older farmers (Williams *et al.*, 1994).

3.4.1.8 *Reforms of the Common Agricultural Policy*

Recently, there has been a suggestion forwarded that the CAP reforms may affect the land-use choices of farmers in a manner deleterious to the aims of the Community Forest. Fraser (1997) produced a model of the effect of the 1992 changes in cereal

support structures on farm income and concluded that, on land with 'poor' characteristics (low yield), there will be a financial incentive to produce crops. In comparison, on 'good' land the income received will deteriorate. A considerable weight of evidence on the FWS and Community Forest suggests that it is precisely these areas of 'poor' land that are likely to be used for woodland planting (Gasson & Hill, 1990; MVCF, 1992; Williams *et al.*, 1994; Lloyd *et al.*, 1995). Tipping the financial balance in this manner may counter-act any benefits of the FWPS, thus discouraging woodland planting.

3.4.2 Issues of management flexibility

The second category of reasons for farmer non-participation are those concerning the restriction of management flexibility in terms of government-imposed conditions on grants, loss of land flexibility associated with tree planting, tenancy restrictions, and restrictions on tree felling imposed by the planning system.

3.4.2.1 *Government land-use conditions*

Independence is prized highly by members of the farming community (see Gasson, 1973; Ilbery, 1985; Shucksmith *et al.*, 1993). Specifically, farmers value their ability to make their own decisions about land-use. Most government grant and subsidy schemes, however, impose restrictions on land use, or at least require monitoring. Evidence is available to show that farmers are deterred from participating in grant schemes because of the necessity of relinquishing some control. For example, Williams *et al.* (1994) found that, amongst those farmers that stated categorically that they would not use woodland planting schemes administered by the Woodland Trust, the main reason was a preference to remain in full control over their decision-making. In separate studies examining the *Environmentally Sensitive Areas* (ESA) scheme (where conditions have been described as "not particularly restrictive" - Whitby *et al.*, 1996: P48), Wilson (1996) and Brotherton (1991) have both noted that the constraints imposed on management play a large part in determining participation in the scheme. Similarly, Evans & Morris (1997) observe that many farmers are reluctant to participate in the Countryside Access Scheme (see Appendix ii) because it requires the relinquishing of some property rights.

Besides the constraints on land use decisions, grants and subsidies may also make demands on farmers' time and thus act as a constraint to performing other tasks. Darques (1988) suggests that farmers find the accounting associated with types of financial aid to be an onerous task and prefer to work in areas that require technical skills where they feel their time is better applied. Although commonly administration tasks such as this are designated as roles for the spouse, they nevertheless can reduce the ability of the farm wife to perform her role as a permanent reserve labour force. This factor may be of little consequence to larger farms where management and accounting staff are employed, but it could act as a deterrent to the smaller independent farm operator.

3.4.2.2 The long-term nature of forestry

The requirement for flexibility has long been a feature of agriculture. Goodman & Redclift (1989) report that many researchers believe agricultural markets are intrinsically unstable and that instability is the rule rather than the exception. There can be little doubt that, in the rapidly changing post-modern society, it is beneficial for all businesses, including farming, to maintain the ability to respond quickly to fluctuations in markets; woodland simply does not offer that flexibility. The problem is exacerbated by the strength of government controls such as felling licences and Tree Preservation Orders which restrict the ability of the land owner to convert woodland back into agricultural production. Such measures reduce the financial incentive of woodland planting (Lloyd *et al.*, 1995).

3.4.2.3 Tenancy restrictions

Many farmers are unable to convert agricultural land to forestry because of tenancy restrictions. In the Marston Vale, for example, three of the major landowners who lease land to tenant farmers - Hanson Properties Ltd/Hanson Brick, Southill Estate, and the Whitbread Estate - all actively discourage farmers from planting trees on tenanted land (MVCF, 1993; Tiffin, 1993). This could have a significant impact on the development of the forest as the Hanson Properties Ltd alone has 10% of the Community Forest area (1600 ha) designated for mineral extraction and landfill, with activity scheduled to

extend until 2080 (MVCF, 1993). Establishing woodland on land zoned for mineral extraction may create problems for the companies as future options for land use may be limited. In Bedfordshire's *Minerals and Waste Local Plan* (BCC, 1993: P35) policy MW 18 states that "Permission will not normally be granted for mineral extraction or waste disposal proposals which would significantly adversely affect trees and woodlands." Thus, while in law farmers are entitled to plant trees on tenanted land (Bishop, 1990), there is significant pressure on them not to do so where that land may be used for mineral extraction or waste disposal.

3.4.2.4 *Planning restrictions*

Even if farmers choose to establish entrepreneurial woodland-based diversification schemes as encouraged by the Community Forest, green belt and other local planning designations limit the options available. Creation of a Community Forest is intended to occur *within* existing statutory plans (CC, 1990), its implementation being under the jurisdiction of the local planning authority. Originally the Countryside Commission intended that the proactive use of planning gain be used widely to aid development of the forests. However, as this caused some initial disquiet about the weakening of the planning system (Counsell, 1995), planning authorities have thus far kept a tight reign on farm diversification within the Forests. As a consequence the establishment of Community Forests currently relies on reactive rather than proactive planning (Bishop, 1990; Tiffin, 1993), with only 3% of development plans in Community Forest areas containing proactive policies and less than a quarter containing policies to ensure any gains at all through the planning system (Counsell, 1995). The Project Director of the Bristol and Avon Community Forest suggests that the problem is one of lack of foresight amongst the authorities: "A more helpful approach to diversification from planning authorities would give a signal to farmers, especially if they showed what was acceptable, rather than stating what was not, i.e. a future vision."

3.4.3 Cultural and socio-psychological factors

"I think it's a big mistake to think these things [farmers' diversification into woodland] are economics driven ... it's a social thing and not an economic thing." (Project Director, Greenwood Community Forest).

Economic and land management issues are clearly important in determining farmers' decisions on Community Forest participation; however, they are not the only factors. For example, Appleton & Crabtree (1991), as cited by Bullock *et al.* (1994), found in a study of the uptake of the FWS in Scotland that 74% of farmers reported that the plantings would not influence their income, and concluded, "It would seem that, generally, farmers display a socio-cultural disinclination to plant on productive land" (Bullock *et al.*, 1994: P227). Since the inability of the economic or 'normative' decision-making models to predict land use was recognised in the late-1960s, frequent attempts have been made at examining the role of farmers' attitudes, goals and values in influencing land use. Researchers such as Gasson (1973) and Ilbery (1983, 1985) have concluded that these factors can play a critical role in affecting farmers' land-use decisions (see chapter 4 for a more thorough evaluation). Such socio-psychological features are not developed independently of society, but are formed as a result of interactions with others. Owing to factors such as the necessity of farmers living 'on the land' and the predominance of family farming, most of farmers' interaction is within the local community itself, and consequently many attitudes, goals and values of farmers are culturally based. The traditional and conservative nature of farming is recognised by researchers (e.g. Ilbery, 1985; Bryant, 1989; Healey & Ilbery, 1990), as is the tendency of this traditional element to hamper the process of innovation diffusion (Bryant & Johnson, 1993). Thus it may be hypothesised that traditional views, particularly those on public access, woodland and farming, may have a considerable influence on the spread of the Community Forest concept amongst the farming community.

3.4.3.1 Traditions of woodland planting

As far as woodland in Britain is concerned, while there is some tradition of woodland maintenance, coppicing, laying hedgerows and the like, there is no tradition of farm woodland creation (Bishop, 1992), and certainly no tradition of creating woodland for the purpose of public leisure provision or forestry (although Slee, 1987, notes that hiring out shooting rights has a long tradition). The traditional uses of woodland have changed over the last 100 years with the advent of cheap coal and hydrocarbons, and the woodlands themselves have been decimated by the extraction of timber during two

World Wars. Commercial forestry in the past was largely the role of the Forestry Commission, established in 1919 “to establish state plantations, to administer policy for private woods and to develop a more coherent national policy for timber” (Blunden & Curry, 1988: P57). While woodland maintenance has continued as the role of the farmer to some extent, responsibility for establishing commercial woodland in the country has been the domain of the Forestry Commission and other large landowners. This may explain why Williams *et al.* (1994) observe that, while farmers strongly appreciate the value of existing farmland in terms of landscape and conservation value, “the difference in attitude towards maintaining existing woodlands as opposed to creating new ones is striking” (P17), with the attitude towards new plantings being generally negative. Gasson & Hill’s (1990) study on farmers’ adoption of the FWS suggests that farmers value the same attributes in new and existing woodland. This does not support the hypothesis that farmers are likely to approach the creation of new woodlands in a more commercial spirit, and bodes ill for the government’s current vision of commercial Community Forests. If the Community Forest and similar farm woodland schemes are to succeed there is clearly a necessity to re-educate farmers as foresters (Gilg, 1991) in order to establish, or to begin to establish, a tradition of forestry within the farming community.

3.4.3.2 *Woodlands as attractors of undesirable elements - the public and other vermin.*

While the Community Forest scheme was established with the intention of providing a recreational area for local urban populations, there is evidence that farmers are unwilling to establish woodlands with a view to public access recreation and tourism (e.g. Gasson & Hill, 1990). Farmers’ opposition to increasing access, although centred around the potential impacts on income from vandalism and interference in farm operations, has extended beyond economics to revolve around the rights of the individual. Private property rights in the UK are widely regarded as sacrosanct (Marsden *et al.*, 1986, 1989). Consequently, the access question has become an emotive issue amongst farmers (Slee, 1987) and poses a major barrier to any attempts to increase the access rights of the public (Harrison, 1991). In addition, there is the fear that the woodland itself creates access problems through its “concealing nature and often peripheral attention given by

their owners”³ (Williams *et al.*, 1994: P22). While Community Forest teams perceive woodland as a beneficial screen/buffer zone from the urban population (Cleveland Community Forest, 1992), farmers have a different interpretation, viewing the screen as a visual impairment to detecting vandals and trespassers. For example, Williams and colleagues’ (1994) study within the Greenwood Community Forest found that no farmers planted trees as a visual screen from the public; however, a number were willing to suggest it would cause increased problems with trespass. Slee (1987: P63) asserts that farmers can become so perturbed by trespass and problems with the public that they may develop “a siege mentality and an antagonism towards visitors.” This has become a stereotype of the general public, driven not by economic or managerial concerns, but by cultural prejudice.

3.4.3.3 *The stewardship ethos*

Another potentially significant influence on the development of the Community Forests is farmers’ self-perception as stewards of the countryside with the responsibility of maintaining the countryside in ‘good heart’. Colman (1994), in supporting the existence of a stewardship ethos, notes that the Nature Conservancy Council only had to enter into management agreements on 8.4% of the land designated as *Sites of Special Scientific Interest* (SSSIs), with some farmers accepting a loss of income without compensation. From this he surmises, “that the owners of such land did not exploit its SSSI designation can be interpreted as evidence of a commitment to stewardship” (P305). While there is a viable alternative perspective, namely, that farmers are suspicious of signing management agreements, if Colman’s analysis is correct, this may represent the vestiges of the ‘gentlemanly ethic’ (altruism, philanthropy and public service) as traditionally associated with the rural squirearchy (Bell & Newby, 1974; Newby *et al.*, 1977, 1978).

Marsden *et al.* (1993: P60) suggest that viewing themselves as countryside stewards provides farmers with their “ideological security.” Afforestation of the countryside goes against this very ethos as it symbolises the closing down of agricultural land (Selby & Petäjistö, 1995). In support of this contention, studies by Williams *et al.* (1994) and Potter & Gasson (1988) found that a number of farmers see it as morally wrong or

³As well as human trespasses farmers are widely concerned about the ability of forests to shelter other forms of vermin, notably foxes (MVCF, 1992; Mather & Thompson, 1995).

‘against their nature’ to allow arable land to revert back to woodland or otherwise be diverted away from agricultural production. As one farmer explained in Morris & Potter’s (1995) study of the adoption of agri-environmental schemes: “As a farmer you hate seeing land go backwards and this scheme [ESA] is contrary to what I have been taught” (P58). If the Greenwood example is taken as representative, farmers’ traditional attachment to the land is likely to pose a considerable barrier to adoption of Community Forest schemes. As Williams *et al.* (1994: P27) surmise, farmers “remain isolated from this [forestry] land use physically, traditionally and spiritually.” Despite the resistance to undertaking forestry *per se*, there is some suggestion that the stewardship ethos does include a moral obligation to manage woodlands and undertake occasional planting, particularly amongst owner occupiers (Bullock *et al.*, 1994). Farmers’ objections are clearly not to woodland *per se*, but rather to planting on a scale that interferes with their role as stewards of the agricultural countryside.

3.4.3.4 *Perceived damage to the farming community structure*

Cosgrove *et al.* (1996) suggest that such large-scale countryside development projects as afforestation may alter the way of life of the individuals and communities affected. There is some evidence that farmers are aware of such potential impacts on the local community. In their study of afforestation in Scotland, Mather & Thompson (1995) found that farmers feared a breakdown in the practice of ‘neighbouring’, that is, providing mutual assistance for specific tasks such as ‘rounding up’ and shearing sheep. Whilst this did not turn out to be a major problem and, as some farmers noted, the system was breaking down before afforestation began, it nevertheless demonstrates that farmers may perceive it as a threat to the nature of rural society. Mather and Thompson (1995: P198) observed that in some areas where the forest extent exceeds 30 per cent “the social character of farming has been transformed,” and some farmers noted this social change as a reason for selling up and relocating to other parts of the country. A similar concern for the destruction of local communities by large-scale forestry is expressed by Bolton (1987).

3.5 Culture, roles, identities and farmers

The above review of the economic, managerial and cultural issues that contribute to the resistance of farmers to afforestation and leisure provision roles presents a broad spectrum of reasons for the observed non-adoption of the Community Forest schemes. While the financial reasons are numerous, it is clear that the issue of encouraging farmers to participate in field afforestation is not simply one of increasing the financial reward. In Potter & Gasson's (1988) study of participation in voluntary land diversion schemes, farmers were asked to bid an amount at which they would be prepared to plant woodland on good agricultural land. In response, sixty one per cent of respondents were reluctant or refused to even offer a figure at which planting woodlands would be acceptable. Bishop (1990) asked a similar question of farmers within the Bristol, Hertfordshire and Tyne and Wear Community Forest zones and found 84% unwilling to provide a financial bid. That such substantial proportions of farmers refuse to even contemplate a subsidy level at which woodland planting is acceptable, suggests that there is a considerable social force behind farmers' reluctance to engage in afforestation.

Support for this contention can be found in other studies of farm woodland planting. Despite the lack of willingness of farmers to provide a compensation level, farmers responding to farm surveys give almost exclusively financial or management oriented reasons for failing to adopt woodland - particularly lack of financial incentive (e.g. Gasson & Hill, 1990; Bishop, 1990; Williams *et al.*, 1994). It could be concluded that refusal to provide an appropriate subsidy level simply reflects an inability to conduct a cost-benefit analysis on farm woodland. However, independent observations by Williams *et al.* (1994) in the Greenwood Community Forest and Allison (1996) in the Midlands Forest suggest that questions of self-identity (i.e. farmers wish to be 'farmers') critically 'underlie' the negative farmer response to establishing community woodland. The dominance of economic/managerial reasoning may be attributable to the positivistic nature of survey methodologies - forcing farmers to articulate a reason for their rejection of woodland planting. In this case the most easily presented economic rationale may be expressed rather than the respondent engaging in complex issues of identity and culture.

With the Community Forest scheme the importance of culture may have been increased through the use of the term 'Community Forest' in naming the scheme. The government's intended meaning is stated as representing "communities of interest" (Countryside Commission, 1990: P36) thereby reflecting the multi-purpose nature of the Community Forests. However, use of the term 'community' was also a political ploy commonly used by the Conservative government and criticised by Evans (1994: P106) as an attempt to conjure up images of a "kinder, friendlier and more co-operative society" - thus taking social responsibility away from central government and industry. The problem with this approach is that, as well as implying co-operation, identification of a 'community' requires that an individual possesses a concept of 'otherness' (Harvey, 1993). Therefore, as Johnston *et al.* (1986) point out, the concept of 'community' can be as easily used for divisive purposes as for encouraging co-operation (Allen, 1993, has observed this as the case specifically for newcomers to rural agricultural communities). With respect to the Community Forest scheme, farmers have already expressed a fear that the term 'Community' will be interpreted by the public to mean that open access to their farmland is permitted (Williams *et al.*, 1994; *Bedfordshire on Sunday*, February 19th, 1995)⁴.

Chapter Two discussed how it was the objective of the Community Forest scheme to initiate changes in the farming culture towards one of woodland-based entrepreneurial activity, and how the farming identity is in crisis as a result of the changing economic and social environment. Farmers at the moment are living with great uncertainty, as the farming role is in the process of redefinition. As farming is a highly traditional profession this is likely to lead to considerable social resistance to changes such as afforestation of agricultural land, and, to a lesser extent, diversification of the income base. The contention is thus forwarded that, rather than the dominance of economic reasoning for rejection of woodland planting shown in other studies, much of farmers' concern for the establishment of farm woodland is on the basis of culture, i.e. the new roles proposed for the agricultural industry simply do not equate with how they perceive themselves as farmers.

⁴ It is clear from the Community Forest plan preparation manual that farmers concerns may be unwarranted. For although, as Spray (1990: P111) points out, the Community Forest concept does not involve the threat of "the king and retinue hunting the royal beasts and cutting off the ears of any peasant daring to intrude" in the supposed manner of the Norman forests it was based on, the rights of private land owners remain as entrenched in law as those of the nobility in the middle ages.

Evidence is available that factors of culture and identity (socially established goals, roles, attitudes, values) will play an important role in farmers' adoption of the Community Forest, even if diversification is profitable. Sir Richard Body (1993: 30), an influential landowner and politician, suggests that the question must be asked "*What is the role of a farmer? ... Is he a businessman, or is he more than that?*", and that until this question has been answered there can be no effective agricultural policy. Ilbery (1992) noted that farmers participating in the Farm Diversification Grant Scheme did not criticise the scheme itself; rather, resistance came from farmers' attitudes to diversification as a business strategy. The surrendering of their self image as an agricultural producer and their unwillingness to employ off-farm labour, thus reducing their independence, were two of the factors involved. As Gasson & Hill (1990) state of the Farm Woodland Scheme, on which the Community Forest scheme was originally based, it "can only succeed if its objectives happen to coincide with the interests of farmers." Similarly, Morris & Potter (1995: P55), in reference to the ESA scheme, suggest that what needs to be assessed is farmers' "willingness to embark on rather more radical departures from conventional farming practice."

Tiffin (1993: P53) suggests that the main question facing the Community Forests is "Can farmers' attitudes be re-aligned with the objectives of Community Forestry?" However, as Williams *et al.*'s (1994) and Allison's (1996) studies suggest, the problem is deeper than that. Attitudes, values and goals would be an acceptable way of investigating Community Forest non-adoption if the intended changes were broadly within the concept of what farming is now. However, Community Forests are not a matter of small-scale diversification or disused corner woodland planting; they are large scale projects of social engineering and must be recognised as such. They are part of the redefinition of the farming role and the developing 'crisis of farmer identity' (see Chapter 2). The farmer is no longer facing the question of "How should I run my farm effectively?" but instead it becomes an issue of "How do I maintain my identity as a farmer?" or 'Who am I?'. Thus, rather than realigning attitudes, the real issue is "Can farmers' *self-identities* be re-aligned with the objectives of Community Forests?"

3.6 Summary and conclusion

In the next decade, the impending changes to the CAP in accordance with Agenda 2000, as well as Britain's eventual entry into the single currency, will influence the economic viability of woodland, on the whole making woodland a more attractive financial prospect. Evidence for this is found in the New Zealand experience, where subsidies were removed in the mid-1980s. This led to the dramatic devaluation of farm-land (a major obstacle to woodland planting in Britain), the rapid diversification of the farming industry (Slee, 1987), and a process of gradual recovery of the countryside to its natural wooded state (Stephenson, 1997). Further, introduction of a single European currency will resolve the problem of fluctuating exchange rates affecting farmers' ability to make long-term cost-benefit analyses. Thus the economic arguments against woodland establishment will decline and the relative importance of cultural resistance (i.e. farmers' willingness to accept new farming roles and the new social direction of farming) will proportionately increase.

Chapter Three has examined the limited farmer response to Community Forests and suggests that non-adoption may be down to three main reasons: (1) the scheme, as it stands, does not appear to be economically competitive, (2) restrictions on management limit both the appeal of the forest and its utility as a land use, and (3) cultural and socio-psychological influences may be causing farmers to reject community forestry on the grounds that it goes against the traditional farming roles and values. Evidence suggests that, while economic factors are frequently suggested as the main motivation for the rejection of farm woodland, there is an 'underlying' factor which may be defined as 'farmers are not foresters'. The roles involved in diversifying into forestry and leisure provision may simply be too unpalatable for most farmers to adopt. Thus the ultimate success or failure of the scheme will depend on whether farmers are willing to become businessmen, entrepreneurs, foresters and leisure managers. As raised in Chapter 1, the problem now lies in developing a simple conceptual framework to investigate cultural influences on behaviour. This is done in the following chapter in a discussion that proposes adopting an approach based around the self-identity of the farmer.

Chapter 4: Developing an identity-based conceptual framework

4.1 Introduction

The potential importance of self-identity resistance to the Community Forest scheme (as outlined in Chapter 3) and the difficulties involved in dealing with the complexities of culture create a challenge for the study; namely, to develop a conceptual framework to investigate how farmers' self-identity may influence their decision on Community Forest participation. This chapter outlines a conceptual framework within which cultural resistance to land-use change can be investigated. The framework is based on Sheldon Stryker's (1968) *identity theory* and proposes that commitment to an identity group will be reflected in the salience of that identity, which will in turn result in the selection of role-behaviours that confirm the individual's self conception. So that, when faced with the alternative farming practices and woodland planting schemes advocated by the Community Forest team, the farmer's commitment to an identity group (i.e. conservationist farmer, agribusiness farmer, diversifier farmer, or conservative agricultural producer (maintain status quo) - the four main post-productivist alternatives) will play an important part in determining their response. Resistance to the Community Forest is likely to arise when proposed new roles do not concur with farmers' self conceptions of what constitutes appropriate farming behaviour.

The chapter is divided into three sections. The first section (4.2) briefly examines the behavioural approach to establish the need for a social framework for investigating 'satisficing' aspects of farmer behaviour. Section two (4.3) outlines the symbolic interactionist perspective on the relationship between society, self-identity and behaviour. The section then discusses how the concepts of symbolic interactionism provide a framework for examining the identity/society/behaviour interaction within the farming community. Finally, section three (4.4) discusses a simple approach to investigating the link between farmer self-identity and behaviour. It examines the *identity theory* model presented by Stryker (1968) and his conceptualisation of the relationship between commitment to an identity group, salience of the identity, and role-

behaviour. A conceptual framework is then suggested to examine the role of self-identity in farmers' decision-making within the Community Forest zone.

4.2 Behavioural approaches to investigating farmer behaviour

Although among contemporary psychologists, identity is considered to play a key factor in motivating behaviour (Hales, 1985; Shamir, 1992; Stryker & Serpe, 1994), the 'identity' construct has rarely been employed to investigate decision-making in agricultural geography. Historically, research up until the early 1960s focused on economic models of agricultural behaviour in the mistaken belief that agricultural decision-making was based almost exclusively on economic rationale (for discussion see Johnston, 1979; Morgan & Munton, 1971; Gold, 1980). However, in the mid- to late-1960s disillusionment with economic models led to the development of the behavioural approach, which emphasised Simon's (1957) 'satisficing' concept, i.e. that farmers do not necessarily indulge in economically optimal decision-making, but instead may optimise social, intrinsic or expressive goals. Development of this approach in agricultural geography owes much to Ruth Gasson's (1973) classification of farmers' goals and values - widely recognised as providing the first theoretical framework for research into satisficing behaviour, and constituting a substantial advance on previous post-war studies (Ilbery, 1985; Bryant and Johnston, 1993).

Gasson's main contention was that, as values are potential motivating forces for behaviour, the 'value orientation' of the farmer may be used as an empirical measure of non-economic motivation, thus illuminating the satisficing component of agricultural decision-making. She proposed that farmers' values could be divided into four dimensions: 'intrinsic', 'expressive', 'instrumental', and 'social' where; (1) instrumental values are those in which farming is viewed as a means of obtaining income and security, (2) social values are those where farming is valued as a means of self-expression and for the sake of interpersonal relations, (3) intrinsic values are those where farming is viewed as an activity in its own right, and (4) expressive values are those where farming is seen as a means of self-expression or personal fulfilment. Results from the 1973 study (see Gasson, 1973, 1974) provided a considerable boost for

advocates of the satisficing approach as they suggested that farmers have a predominantly intrinsic orientation to their work; a finding subsequently confirmed by others using similar frameworks (e.g. Kliebenstein *et al.*, 1980; Ilbery, 1983; Gillmor, 1986). Since Gasson's paper, the satisficing nature of farmers has tended to dominate behavioural agricultural research, with many choosing to either directly apply Gasson's framework (e.g. Ilbery, 1983, 1985; Gillmor, 1986) or emphasising the compatibility of their framework with Gasson's (e.g. Austin *et al.*, 1996).¹

As a measure of farmers' non-economic goals, studies of satisficing behaviour have commonly employed cognitive-behavioural constructs such as attitudes, values and beliefs; an approach that has proved valuable in investigating non-economic behaviour, particularly 'conservationist' behaviour (e.g. Tait, 1983; Carr, 1988; Black & Reeves, 1993; Vogel, 1996; Wilson, 1996), and spatial patterns of innovation diffusion and land use (e.g. Brown, 1980, 1981; Ilbery, 1983). However, as is becoming increasingly apparent from research in social psychology, the determinants of behaviour are far more numerous than the simple combination of attitudes (both towards targets, i.e. goals, and behaviours) and subjective norms (the influence of significant others) initially supposed². For example, in certain situations 'habit' (reflex behaviour) may be critical (see Eagly & Chaiken, 1992), in others, 'morality' (e.g. Gorsuch & Ortberg's, 1983 study of blood donating behaviour), and in still others, 'self-identity' (e.g. Biddle *et al.*, 1987; Charng *et al.*, 1988) may be the most important factor. The key issue here is that importance of the respective behavioural antecedents (e.g. attitudes, subjective norms, habit, morality, self-identity) appears to be far more dependent on situational factors

¹ While Gasson's classification is regarded as being of seminal importance, a similar classification had previously been forwarded by Dalton (1967). Dalton divided goals into three categories; (a) physical well being - income goals aimed at avoiding poverty, (b) social recognition - goals directed at achieving status, respect and power in the community, and (c) ideological motives - goals that include "creative activity", the idea of duty, and parental and family obligations. The similarities between Gasson's and Dalton's classifications are marked; "physical well-being" directly equates to "instrumental goals" and "social recognition" equates to "social goals." The only major differences between the two classifications/frameworks is that Gasson divides "ideological motives" into "expressive" and "intrinsic" goals, and Gasson's research was, unusually for the time, not primarily an economic analysis.

² During the 1960s there was considerable debate within the social psychology field on the value of the attitude construct as a antecedent to behaviour, fuelled largely by the failure of simple attitudinal models. In Blumer's (1955: P63) discussion of the attitude-behaviour link he describes attitude as "no more than an initial bid for a possible line of action." Fifteen years later, a review of 33 research publications led Wicker (1969: P65) to conclude that "Only rarely can as much as ten percent of the variance in overt behavioural measures be accounted for by attitudinal data." Current theorists have developed a more comprehensive understanding of the attitude-behaviour relationship through the inclusion of factors such as habit and self-identity as behavioural antecedents (see Eagly & Chaiken's, 1992: P209 *Composite model of the attitude-behaviour relation*).

than previously envisaged, so that a general 'satisficing' framework based around attitudes, goals, values and beliefs may not be universally appropriate. In particular, in situations where social factors are dominant, a framework based on social and cultural aspects of decision-making may be more appropriate than one based on attitudes.

Evidence from behavioural studies of agricultural decision-making suggests that the significance of social factors in determining enterprise choice is increased through economic crisis. For example, Coughenour (1976) found that, at a time of economic crisis for the Australian wool industry, social commitment to sheep-farming was important in predicting whether farmers continued to farm sheep, or changed to farming beef cattle. Similarly, Schroeder *et al.* (1985) observed that a worsening financial crisis led farmers in Illinois to place more emphasis on the social value of being a farmer to explain their determination to continue. It is proposed here that at this time of crisis for the farming-role the desire to maintain self-identity may exert greater influence over decision-making than cognitive elements. A wider appreciation of the role of social and cultural factors has begun to emerge in the search for solutions to overproduction and environmental problems. For example, Short (1997: P42) notes that traditional farming systems, previously regarded as retarding progress in agriculture, are now being viewed as a potential source of inspiration for the future development of agriculture as "history, locality and social values all have the potential to divert 'rational trajectories of change'." Rogers (1983: P223) contends that in the innovation diffusion literature, "Many illustrations can be provided of how the incompatibility of an innovation with cultural values blocks its adoption." Young *et al.*'s (1995) theoretical work on the farming culture's effect on adoption of agri-environmental schemes reasons that the farming 'culture' may help to explain agri-environmental decision-making as farmers frequently use cultural reasoning (such as their role as stewards) to justify their behaviour to the wider public.

These studies suggest that an approach that investigates cultural obstacles to innovation diffusion may add a needed social perspective to studies of agricultural behaviour. However, the search for a socio-cultural approach in agricultural geography is hampered by the lack of a cohesive theoretical approach to explain the interaction between the individual decision-maker and wider society and how this relates to farmer decision-

making. This is reflected in earlier criticisms of behavioural approaches in that they fail to investigate sociological dimensions including social status and role, thereby removing the individual from his/her social context (Cox, 1981). In this study, it is proposed to investigate the use of a self-identity based framework of social behaviour - an approach particularly salient in the face of the looming crisis of farmer identity - to determine how self-identity and commitment to a social group may influence farmer resistance to the Marston Vale Community Forest.

As a predictor of behaviour in the long-term, the 'attitude' approach has the disadvantage that measures of attitudinal intention can quickly become unreliable, e.g. over a week (Fishbein & Ajzen, 1975). Identity, however, is removed from situational demands (Burke, 1980) and renowned for its 'durability and permanence' (Harvey, 1993, P59). Further, the symbolic beliefs through which identity is maintained are not readily susceptible to revision (Cary, 1993). In particular, whereas attitudes relate to specific behaviours or objects (an attitude may be defined as a bipolar - e.g. good/bad, favourable/unfavourable - evaluation of a *specific* object with behavioural implications, see Fishbein & Ajzen, 1975; Eagly & Chaiken, 1992), 'identity' has a far broader influence as it comprises a category to which "a particular range of normative sanctions is relevant" (Giddens, 1984: P83).

The first step in developing this framework is to briefly outline current theory concerning the relationship between society and self-identity, and how the maintenance of self-identity in a social context can influence behaviour. The conceptualisation of the society-identity interaction presented here follows the symbolic interactionist perspective, or, more specifically, what Stryker (1980) and Serpe (1987) term a 'social structuralist' interpretation of that perspective. Symbolic interactionism is commonly used as a framework for social psychology based identity theories (e.g. Weigert *et al.*, 1986) because it directly addresses the question of how self-identity is constructed through interaction with society. For a more detailed explanation of symbolic interactionism see, for example, Blumer (1962), Laurer & Handel, (1977), Stryker (1980), Stryker & Statham (1985), and for a wider discussion of the nature of identity and society see Giddens (1991).

4.3 A symbolic interactionist perspective on society and self-identity

The symbolic interactionist approach initially laid out by George Herbert Mead (1934) in his (posthumous) book “*Mind, Self and Society*” is a somewhat rambling affair - often criticised for being difficult to operationalise and failing to define any methodological procedures (Meltzer *et al.*, 1975). Consequently, much of the detail of symbolic interactionism has been provided by later researchers in their efforts to derive a more directly applicable version of the approach. In particular, behavioural aspects were not dealt with to any great degree in Mead’s original outline but have been largely interpreted since the 1960s by role theorists (e.g. Biddle & Thomas, 1966; Horrocks & Jackson, 1972) and identity theorists (e.g. Stryker, 1968; McCall & Simmons, 1978; Burke & Reitzes, 1981). Thus some of the theory outlined below cannot be attributed directly to Mead.

For symbolic interactionists, the individual and society are characterised as part of a dynamic, constantly interacting system in which the self is conceptualised as “essentially a social structure [that] ... arises from its social experiences” (Mead, 1934: P140). Mead argues that “our thinking always takes place by means of some sort of symbols” (P146), and that, as the meaning of these symbols has been negotiated through interaction with society, every action and object has a meaning of shared significance to both parties. Self-identity develops as the individual interacts with the social group and learns the group meanings. Through such interactions meaning is being constantly socially renegotiated³. Eventually, the social structures of meaning such as language, interpretative procedures, attitudes, roles, and social class perspectives become internalised (Coughenour, 1976; Weigert *et al.*, 1986) - i.e. the individual begins to view them as part of his/her own - and the individual adopts the ‘self-referent label’ or ‘positional label’ (Stryker, 1980) of the group “I am a”. Membership of the group in the eyes of others is developed and maintained through displaying commitment to the same symbolic meanings as held by the wider group through, for example, financial investment in significant symbols⁴, socially appropriate behaviours, or castigation of

³ As Stryker and Serpe (1982) suggest, the theory presupposes the existence of an organised society.

⁴ ‘Significant symbols’, according to Stryker and Statham (1985), are objects (including behaviours) which may be used, via the median of a mutual understanding of their symbolic significance, to convey meaning or an idea. “For an individual actor an early stage of an act can come to represent a later stage of

those who hold different meanings. In this way, every individual is a reflection of his/her socio-cultural upbringing.

For example, if a person performs the roles of a farmer it is likely they will come in contact with other members of the farming community, and, through hearing stories and listening to the interpretations placed on events and objects, will learn the social meanings of farming⁵. If the individual then displays significant symbols that reflect commitment to the group, either in terms of attitudes/values or behaviour (such as purchasing new machinery), they may receive positive social re-enforcement. However, if the significant symbols are not in keeping with the group identity (such as approval of the ramblers association and its objectives) admonishment will follow. In this way the individual learns what is required to be accepted into the farming community and, assuming they continue to display appropriate commitment, will eventually be recognised as a member. For the individual member, the advantage of attachment to an identity group is that it provides both a sense of security and a stable framework with which to understand the world through offering shared meanings, interpretations and understanding of events and objects (Douglas, 1983).

If society was homogeneous this conceptual framework would suggest that all individuals share a common understanding of the world under one global identity. However, this is clearly not the case. Instead, society is structured into distinct social groups, cultures and sub-cultures, where members attach different meanings to the phenomenological world and thereby believe different things, hold different values, and behave in different ways (Lauer & Handel, 1977; Hogg & Abrams, 1988). To account for this, proponents of symbolic interactionism propose that the self concept does not comprise a single unitary self, but rather it is differentiated into a multitude of identities (also called 'role-identities' to reflect the degree to which identity originates from role-performance - e.g. Burke & Tully, 1977; McCall & Simmons, 1978), each referring to a different social group with different sets of meaning and associated behavioural

the act. Some gestures develop an additional and important property, that is, they come to mean the same thing (imply the same future behaviours) to both the individuals who produce and the individuals who perceive them. When this occurs the gestures have become significant symbols" (Stryker & Statham, 1985: P321).

⁵ Evidence suggesting that farming is a symbolic as well as instrumental activity has been found in a number of studies (see Schroeder *et al.*, 1985: P309).

implications. This multiple-identity approach is by far the most widely held conceptualisation of how the self is structured (see Stryker, 1981).

Typically, identities are conceived of as being organised into a hierarchy where the salience of the identity, i.e. its location in the hierarchy, increases its probability of being selected (e.g. Stryker, 1980; McCall & Simmons, 1978; Burke, 1980; Callero, 1985; McCall, 1987; Stryker & Serpe, 1994)⁶. Invocation of the identity is dependent on how the individual perceives the situation - i.e. what identity/ies is/are appropriate - and the opportunity for the identity to be expressed - i.e. whether the situation permits display of significant symbols (Stryker & Serpe, 1982; Roberts & Donahue, 1994). Multiple-identity structures, each with different goals, values and attitudes, have been suggested as responsible for the limited successes experienced in predicting human behaviour. For example, Patrick *et al.*, 1983 observe of behavioural approaches to agriculture:

“Past studies generally have viewed farmers' goals as a unidimensional preference hierarchy. They assume that goals are evaluated on a single continuum ranging from undesirable to desirable. However, farmers may visualise a goal as highly desirable from one perspective but less desirable from another” (Patrick *et al.* 1983: P315).

In this case the authors do not refer directly to identity, but rather to ‘perspective’. Similarly, Gagnon (1988: P237) reasons “Maybe the ordinary man or woman ... doesn’t behave like a single-minded individual because he or she isn’t one.”

The interpretative framework provided by identity also provides a frame of reference with which an individual can judge which actions or potential actions are socially appropriate (Reitzes & Burke, 1980; Burke & Reitzes, 1981) and is thus “all important as an influence on behaviour” (Johnston, 1991: P214). For example, in an agricultural context, self-identity has been said to define the components of appropriate farming practice (Seabrook & Higgins, 1988; Shucksmith, 1993). Within the identity groups exist what Stryker (1968) describes as ‘shared behavioural expectations’, more conventionally labelled ‘positional roles’, or “behaviours characteristic of those sharing

⁶ Gagnon (1992) has a slightly different view, where identities are given more autonomy as independent ‘voices’. He suggests, “The self is composed of voices in conversation, voices that are given names and among whom there are rules for who speaks and in what order” (P231).

a commonly recognised identity or social position”(Biddle, 1979: P66). In this study these ‘positional roles’ have been termed ‘role-behaviours’. These roles are essentially significant symbols of group belonging. In reality, almost all behaviour has some symbolic or social meaning (e.g. see Emerson, 1976, 1981), but it is in understanding the meanings and performing the behaviour for social purposes that it becomes role-oriented. Labelling oneself, others, and groups, e.g. “I am a”, “I am also a”, “I am not a”, “He is a”, “They are”, provides the person with a “directive for action” (Santee & Jackson, 1979: P143) as it evokes behavioural expectations. This differential concern about the relationships with particular identity groups “has long been recognised by social psychologists as an important determinant of behaviour” (Jackson, 1981: P138), as people use role-identity as a basis for planning their future (McCall & Simmons, 1978; Spenner & Rosenfield, 1990). Although not specifically outlined by Mead, the driving force behind motivation to exhibit socially appropriate behaviour is widely perceived as the self-esteem enhancement role-behaviour may provide (Gergen, 1971; Burke & Reitzes, 1981; Stryker, 1987). It is seen as important for the individual to maintain his/her self-image in the eyes of others.

In summary, a structural symbolic interactionist perspective of behaviour proposes that society is structured into groups with similar behavioural expectations of their members, and that these behavioural expectations provide the individual with a directive for action. Individuals develop identities through interaction with the groups, and these identities (positional role designations) enable the individual to determine which behaviours are appropriate to the situation and to assess the possible social consequences of a particular course of action. As society is structured into a multitude of identity groups, the individual may also maintain a number of identities, each of which is required in different circumstances. These multiple-identities are structured into a hierarchy of importance, so that the most salient identity has the greatest chance of being deemed appropriate, and consequently behaviour is most likely to be structured around supporting that identity.

Thus, if a farmer sees him/herself in the work role as predominantly a businessman and associates with others with a similar understanding of farming, social recognition is likely to be achieved by performing behaviours and obtaining significant symbols that

confirm his/her ability as a businessman. In this case, any pressure to intensify production may be seen as denying the farmer not only income, but also social status - at least until a renegotiation of meaning within the group enables new significant symbols to become established. This provides a simple model of how social and cultural factors may influence agricultural behaviour such as the adoption of agri-environmental schemes. While Young *et al.* (1995) suggest that it is difficult to link 'culture' and 'behaviour', the plethora of behaviour oriented identity studies conducted in the field of social psychology suggests that 'self-identity' is relatively easily linked. As symbolic interactionism views self-identity as a reflection of society, identity studies can lay strong claim to providing a cultural model for investigating agricultural decision-making.

4.3.1 Identity and the farming community

Despite the growth in the importance of the self concept in social psychology, only rarely has research been conducted into aspects of society and identity in studies of agricultural behaviour. Instead, satisficing studies have largely maintained the perspective of 'economically rational man' advocated by the early economic models to the extent that 'satisficing' has been criticised by a number of humanist geographers as no more than a negation of economic theory (e.g. Ley, 1981; Harvey, 1981). In remaining within the framework of neo-classical economics, the approach makes a general assumption that the farmer acts as an independent decision-maker, and therefore tends to downplay the influence of social and cultural influences on decision-making.

Before proceeding to outline the conceptual framework, it is necessary to assess whether the symbolic interactionist approach is appropriate in an agricultural context. In particular, there are two aspects which may be of importance:

1. Are there distinct, role-based identity sub-cultures⁷ within the farming community and can farmers recognise the distinctions, i.e. does the symbolic interactionist perspective provide a valid model for investigating the farming community?

⁷ The term 'identity sub-culture' is used to reflect the fact that identities are comprised of internalised social meanings and as such, culture is simply the social manifestation of identity. For example, note the similarities with the 'identity concepts' outlined above and Young *et al.*'s (1995: P16) definition of culture: "Cultural meanings ... are socially constructed. ... Farming culture exists within individual

2. Is there any evidence that commitment to an identity group can influence decision-making on the farm, i.e. does the mechanism suggested by the symbolic interactionists through which identity influences behaviour function in the farming community?

Although there are very few studies which specifically address these questions to even a moderate degree, a picture of the likely nature of the relationship can be gleaned from observations researchers have made in the course of other studies.

Cultural identity within the farming community

The existence of different types of farmers has long been recognised as is evidenced by the plethora of agricultural typologies generated. Classification schemes can be narrowed to two main types; those based primarily on farm structure, economic position and management approaches (e.g. Marsden *et al.*, 1986; Battershill & Gilg, 1996), and those based primarily on farmers' goals, attitudes and values (e.g. Wilson's 1992 and 1996 division of farmers into utilitarians and conservationists, and Austin *et al.*'s 1996 division into 'yeomen' and 'entrepreneurs'). Both approaches appear to identify four main sub-cultures of farmer (although there is a notable degree of overlap between the groups); the profit motivated 'agri-businessman', the environmentally concerned and life-style motivated 'conservationist', the entrepreneurial, often economically constrained 'diversifier', and the conservative, farming minded 'agricultural producer' (see Table 4.1).

	Agricultural Prod.	Agribusiness	Conservationist	Diversifier
Wilson (1992, 1996)	Utilitarian	Utilitarian	Conservationist	Utilitarian
Battershill & Gilg (1996)	Traditional	Commercial	Organic	
Ilbery (1988, 1991)		Accumulators		Diversifiers
Marsden <i>et al.</i> (1986)	Sub-marginal	Corporate / merging capital	Sub-marginal	Diversified
Shucksmith (1993)	Conservatives	Accumulators	Disengagers	Disengagers
Austin (1996)	Yeomen	Entrepreneurs		Entrepreneurs

Table 4.1: Farming types or 'sub-cultures' as identified by various farmer typologies.

farmer's minds as a set of attitudes that they use to make sense of their relationship with the environment. This culture may be shared within a particular group with common understandings."

These classifications reflect the three basic strategies of post-productivist agriculture as suggested by Marsden *et al.* (1986) and Ilbery *et al.* (1996), (1) maintain agricultural production, (2) diversify the income base, and (3) survive as a marginalised business; where, under harsher economic conditions resulting from changes to the subsidy system, both maintaining ‘agricultural production’ and ‘conservationist’ farming (reliant on subsidy schemes) are regarded as marginalising the business.

Whatmore *et al.* (1987a: P23) advise that the problem with such taxonomic typologies is not that the differences they identify do not exist, but that they make the positivistic assumption that behaviour may be explained by the identification of “regular, observable relationships between social events or phenomena.” Thus, although relationships between the criteria and behaviour are implied, in reality the classifications simply represent a collapsed form of census data which may bear little resemblance to the actual structure or behaviour of the farming community. If any meaningful existence is to be attributed to these groups, it must be established that they represent social-cultural divisions (sub-cultures/identity groups) within the farming community, rather than simple taxonomic categories. Young *et al.* (1995) support this contention in suggesting that ‘the farming culture’ in fact comprises a number of sub-cultures which may vary between types of farming, and should be investigated at a sub-culture level. Similarly, Jones (1975: P27) contends that the farming ‘community’ may be more meaningfully conceived of as “very many overlapping sub-systems of farmers.”

Evidence from the literature, while scarce, suggests that identity sub-cultures do exist within the farming community and that farmers can recognise and differentiate between these groups through the presence of group-specific significant symbols. In particular, the importance of commercial success has been suggested to vary between sub-cultural groups. For example, Coughenour (1976) notes that making a satisfactory income is an essential status symbol for *some* farmers. Dalton (1967) observes, in an agricultural context, that “In the western capitalist world success in business very often brings status with it, but this will depend on the community and group” (P366). Likewise, Gasson (1974) notes of farmers in the UK, “Many smaller farmers oppose the image of modern large scale farming, and the ‘barley barons’ and ‘broiler kings’ may receive little esteem

from their more traditional neighbours ... Larger farmers in their turn may disparage traditions and are sometimes scornful of those who seem more concerned to maintain the *status quo* than to progress” (Gasson, 1974: P134). A similar conclusion was reached by Bell & Newby (1974).

Arable farmer and broadcaster John Cherrington’s (1979) autobiography ‘*On the smell of an oily rag: - my 50 years in farming*’ suggests his perspective is of a farmer as a businessman. For example, he suggests “Mr Park was not a good farmer. He lacked the basic instincts of a businessman and had no idea of the economics of any farming operation” (P29). In addition, Cherrington criticises the type of farmer who is prepared to try diversification schemes. In reference to a P.G. Holder (to whom Cherrington was apprenticed) he suggests: “The farm was littered with his failed hopes - embryo schemes which had come unstuck. This most obviously was not the farm for me to learn on.” (P11). Holder’s reported response to criticism was, “it’s my money, my cattle and my farm. I started with nothing and am far from bankrupt yet, and what is more, I enjoy my life” (P11).

That farmers can differentiate between the social groups has also been noted in Higgins & Seabrook (1986) and Seabrook & Higgins’ (1988) investigation into the role of farmers’ self concept in determining agricultural behaviour in the UK. They suggest, largely from participant observation, that “producers recognise a variety of sub-groups, defined by the behavioural patterns to which affiliative preferences are expressed,” and that “this system of perceptions has the ability to reject change and reduce flexibility or to predispose individuals towards particular areas of change” (Higgins & Seabrook, 1986: P21). This argument is backed up by references his participants make to alternative groups, strongly indicating that farmers are capable of defining both identities and counter-identities⁸, and that these identity sub-cultures are recognised by

⁸ Peter Burke (Burke, 1980; Burke & Tully, 1977; Burke & Reitzes, 1981) suggests that roles are given meaning by their relationship to counter roles and that, therefore, as identity comprises the internalised component of a role, identities are also given meaning by counter identities (This perspective is also adopted by social identity theorists with respect to categories of social identity e.g. Hogg & Abrams, 1988). For example, the role-identity of ‘Conservative’ does not stand in isolation but relates to counter identities such as ‘Liberal’ or ‘Socialist’. An individual whose self-identity centres around being a ‘Conservative’ may have their esteem enhanced by negative feedback from perceived ‘Socialists’ - thus behaviour may be designed to obtain this negative response. Stereotypes attached to both the identity group and the counter-identity group are understood by both groups (Leyens *et al.*, 1994). A farmer may

the farming methods that typify the group. For example: “God help us, I’d do it if I had to [give up dairy farming] but I really do not want to become that sort of a bloke” (Higgins & Seabrook, 1986: P21) and, “George R. has all these check lists, but of course he’s a business man, he’s not a proper stockman [He then suggests that spending more time with the cows than the family qualifies him as a ‘proper stockman’]” (Seabrook & Higgins, 1988: P104).

To argue for a socially-based framework for decision-making requires that farmers are not only able to recognise and differentiate between groups, but also that such peer groups are responsible for influencing farmer behaviour. Here the evidence is more conclusive. While a number of studies have found that farmers are sometimes reluctant to acknowledge their peers as contributing significantly to their farm management decisions (e.g. Carr, 1988; Ward & Munton, 1992), in general, research suggests peer pressure is an extremely important factor (e.g. Pampel & van Es, 1977; Higgins & Seabrook, 1986, Seabrook & Higgins, 1988, Mather, 1992; Shucksmith, 1993; Short, 1997). Behavioural evidence points towards the peer group having a vital role in decision-making as is indicated by, for example, a tendency to provide mutual assistance for some farm tasks (Mather & Thompson, 1995), the dominant role of farming community influence in determining conservationist behaviour (Carr, 1988; Carr & Tait, 1990), over-investment in roadside fields and observation of neighbouring farms from the road (Higgins & Seabrook, 1986; Seabrook & Higgins, 1988) the use of farm-size, tenure system and husbandry practices as status symbols (Bell & Newby, 1974; Saunders *et al.*, 1978) and purchase of equipment as status symbols (Goldstein & Eichhorn, 1961; Rogers, 1983; Higgins & Seabrook, 1986; Seabrook & Higgins, 1988). The overwhelming evidence thus suggests that lack of acknowledgement of peer pressure may be more appropriately attributed to the importance attached to being seen as ‘independent’ than to a genuine lack of peer group influence.

Commitment to identity group

Having discussed evidence for the existence of farming identity groups and farmers’ ability to recognise other ‘types’ of farmer, it must be established that commitment to an

react strongly against perceived conservationists or ramblers rather than trying to gain recognition from these groups, and vice versa.

identity group can influence behaviour. Here again, because of a lack of emphasis on social influences on behaviour, evidence is scarce. Perhaps the most notable study examining the effect of social commitment on agricultural enterprise choice was made by the American sociologist, Milton Coughenour, who devised a behavioural theory based on commitment, the 'theory of instrumental activity' (Coughenour, 1976, 1984). His theory has a noticeable symbolic interactionist perspective, in particular its central contention that work opportunities commit an individual to specific work roles, and it is these "identity enhancing instrumental activities" (Coughenour, 1995: P387) which in turn sustain commitment to the farming identity group and thereby to the farm enterprise⁹. As the farmer commits more time, effort and capital into a particular enterprise, social relationships develop based on these activities, and alternative relationships are renounced. Thus the more committed the farmer is to the enterprise the greater the social cost of changing to an alternative, and, in a cost-benefit analysis that includes social cost, economic benefits may be outweighed by social disadvantages. Applying his theory, Coughenour (1976) found commitment to be an important factor in influencing enterprise choice.

The significant influence of commitment to an identity group on enterprise choice and land use is also evidenced in a study of ethnic farmers in the United States. Salamon (1985) investigated the influence of ethnic identity on two groups of farmers in Illinois; 'Yankee' farmers with non-Catholic British ancestry, and 'German' Catholic farmers. Although the two groups of farmers were only 20 miles apart and both had originally maintained a mixed farm strategy, Salamon noted that the community committed to a Yankee ethnic identity had changed their farming methods over the last 50 years to become grain farmers (only 3% involved livestock), whereas many German farmers had retained the traditional approach (27% involved livestock). In addition, the Yankee farms were larger, less fragmented, more likely to be rented, and their systems of land inheritance were quite different. Salamon concluded that the differences were down to the different values of the two communities, with the Germans regarding farming as

⁹ For example, "In enterprise activity, such as wool growing or cattle raising, social approval is gained from admiring associates in the market, livestock competitions, and periodic interaction with friends and neighbours when the quality and success of one's endeavours are subjects of conversation." (Coughenour, 1976: P79). Similarly, McEachern (1992: P166) suggests that the act of selling livestock at a market "... is about farmers' status and prestige since the animal embodies their husbandry; the knowledge, technique, skill and capability involved in nurturing rather than just exploiting animals."

predominantly a life-style, and the Yankees adopting a more business-like, entrepreneurial approach. Commitment to the respective groups thus influenced management decisions and, consequently, land-use patterns.

4.3.2 Studies of agricultural identity

While there is no established or common conceptual framework for the investigation of the relationship between identity and behaviour in an agricultural context, there have been a number of studies which either investigate the proposal directly or suggest future research directions. In the UK there are two good examples of such studies.

First, Seabrook & Higgins (1988) and Higgins & Seabrook (1986) conducted a study in the 1980s looking into the role of farmers' self concept in determining agricultural behaviour in the UK. Fifteen dairy farmers in Staffordshire/Derbyshire were interviewed, from which it was concluded that frequently farmers' resistance to changing farm enterprise results from conflicts with their image of the self. The authors suggest that this may be a more important factor than a lack of knowledge of the alternative enterprises. Overall, the study fails to develop a theoretical framework linking the self concept to farm management practices. Rather it concentrates on determining whether the farmer's self concept defines how he (sic) perceives appropriate farming practice. Consequently, although the results are interesting and provide one of the few assessments of the influence of farmer identity on decision-making, the study fails to develop an understanding of the processes involved or contribute greatly to any theoretical development of an identity-based approach.

In contrast, Shucksmith's (1993) study into farm household behaviour presented a theoretical framework with many similarities to an identity approach. His theoretical framework was based on Bourdieu's (1977) concept of '*habitus*' which, as with general symbolic interactionist approaches, proposes that individuals cumulatively assimilate over time the ethos of being a farmer and that this provides the individual with a disposition to act. It is, according to Aldridge (1998: P5) "a durable set of cognitive and affective dispositions rooted in early socialisation in the family and at school ... [and] leads people into strategies of avoidance." Thus, Shucksmith (1993: 468) submits,

“many options potentially open to farmers (including many unusual forms of diversification) may never be seriously considered because they are literally ‘unthinkable’.” The central feature of his use of the *habitus* concept is his conclusion that, because *habitus* is cumulatively constituted and will change only gradually over the course of a lifetime, “it is possible to seek to identify and isolate certain enduring aspects of the disposition-to-act which may then be used as a basis for predicting behaviour” (P469). Shucksmith proposed from panel interviews that farmers could be divided into three ideal types of *habitus*: *Accumulators*, who are expansionist, business oriented, prepared to change the farm structure radically and prepared to take risks; *Conservatives*, who are traditional, conservative in technique, committed to farming as a way of life and strongly resistant to change; and *Disengagers*, who are decreasing their commitment to agriculture. He found that farmers within these groups would often only accept work consistent with what they considered behaviour befitting a ‘good farmer’, and concluded that farmers’ reluctance to engage in post-productivist activities will only be overcome if there is a “cultural transformation which redefines the image of ‘a good farmer’ in his own eyes and in those of his peers” (P477).

It is immediately recognisable that perspective is similar to that of structural symbolic interactionism. However, the problem with the concept of *habitus* is that it does not conceive of the self as made up of multiple-identities and therefore has no means of explaining why one behaviour may be selected in one instance and a different choice made under different circumstances. In addition, its ‘instinctiveness’ makes it a very difficult construct to operationalise. It does however, represent a valuable move towards recognising the importance of the identity concept in farmer decision-making, and in particular the role identity is likely to play in impeding the implementation of post-productivist agricultural strategies.

The cultural perspective on farmer behaviour appears to have also received attention from Dutch geographers - although, again, there has been no cohesive conceptual framework developed. Two studies in particular merit attention. First, Weerdenburg (1973), in discussing the reasons why farmers were reluctant to change their occupation, even when the economic pressures were seemingly irresistible, presented the concept of ‘conditioning’. Weerdenburg proposes that the motivations for remaining in farming

commonly mentioned in the literature - for example, independence, working with nature, the fixed nature of assets, and non-transferable skills - cannot independently account for farmers' reluctance to change occupation because they are present in other occupations. Yet the degree of resistance to occupation change displayed by farmers is unique. Furthermore, he suggests that the willingness of farmers to leave farming decreases the more the social setting in which they grew up in is 'predominantly agricultural', and that this is more important than economic factors such as farm size and income. From this it is concluded that farmers have become 'conditioned' into being farmers. The role of interaction between the individual and society (suggested in the symbolic interactionist perspective as responsible for moulding self-identity) is given strong emphasis as he states,

"... from childhood the life of the farmer has been [due to the close relationship between farmer, farm and household], more than in other occupations, very intensely bound with this agricultural world. Being a farmer has become as it were a character trait" (P34).

As 'character trait' can be read as 'identity', Weerdenburg is essentially describing a theory for explaining agricultural behaviour (resistance to change) based on farmer self-identity. Unfortunately, his expressed wish that the concept of 'conditioning' may provide a starting point for answering the question of why farmers appear so attached to being a farmer appears to have gone unheeded.

Second, and from a slightly different angle aimed at accounting for variations in agricultural behaviour, Van der Ploeg (1993) suggests a system of 'farming styles' as a perspective for viewing agricultural change. 'Farming style' is defined as "a cultural repertoire, a composite of normative and strategic ideas about how farming should be done" (P241). Similarities may be drawn with the identity approach in that the currency of the 'farming style' is suggested to be 'metaphor', which is defined as "an attempt to understand a particular experience in terms of another" (P250). The suggestion is then made that,

"actors themselves use [metaphors] to typify and distinguish themselves from others ... Where achieving the largest production possible with the least possible labour is the main strategic concern, 'the machine' appears as the logical link in the chain, as the effective

metaphor that binds the named elements. Those who use such a strategy consequently appear as 'machine farmers', a metaphor, which along with others such as 'cow farmer', the 'fanatic farmer', the 'thrifty farmer' and so on, 'speaks a language' to most actors. ... Behind each of these metaphors lies a particular strategy and with it a specific, i.e. definable and differentiable practice" (P251).

In van der Ploeg's theoretical framework the 'metaphor' represents the symbolic interactionists 'significant symbols' and includes the labelling of the identity group as a significant symbol (metaphor) in its own right. Van der Ploeg argues that recognition of farmer 'metaphors' is of growing importance in agricultural terms because of the different pressures the approaches to farming they represent exert on the environment.

The principles of the role-internalisation have also been suggested by the German geographer Sachs (1973: P202). Sachs proposes that "The future farmer - like everyone involved in family-owned enterprises - grows to his professional role so that he has almost no option but to 'internalise' this role, i.e. to accept it as an element of his own self. Through socialisation the so-called real farmer comes to develop not only a particular value orientation, but also a 'subconscious knowledge' of his own behavioural situation including its main determining factors." He further states that, through this habituation and socialisation process, children from farm families become farmers without having made a decision to become a farmer. While this study does not provide any link between internalised 'role' and, for example, van der Ploeg's "farming styles", it is nevertheless evident that a different upbringing or socialisation process for a farmer would result in a different approach to agriculture - the 'subconscious knowledge' of the behavioural situation providing the individual with an instinctive disposition to act on the basis of role-identity beliefs.

Other studies have alluded to the possible importance of an identity-based approach without suggesting a conceptual framework. Gasson *et al.* (1988), in their review of the farm family as a business, note that Stanworth & Curran (1981: not cited) have adopted the perspective of 'contrasting identities' as a means of accounting for the different priorities assigned to business objectives. The identities suggested are: "The '*artesian identity*' focuses on intrinsic satisfactions such as the autonomy of work, status and the satisfaction of producing goods or services. The prime focus of the '*classical*

entrepreneur' is on earnings and profit, though profit maximisation is by no means the only goal. The '*manager identity*' centres on recognition, especially by those on the outside of the firm, of his managerial excellence" (Gasson *et al.*, 1988: P4). Unfortunately, this proposed framework was not tested in an agricultural context but relates to theories of the firm, with the relationship between farming and entrepreneurship implied. As with Higgins & Seabrook, no substantial conceptual framework was developed, rather it presents a recommendation for a possible line of investigation.

Notable of all identity based studies is the use of entirely new terminologies for what remains essentially the same theory. Whether examining Shucksmith's concept of 'habitus', Weerdenburg's 'conditioning', van der Ploeg's 'farming styles', or Stanworth and Curran's 'contrasting identities', all appear to be rediscovering the same phenomenon, and one for which there is no cohesive conceptual framework in geography - namely, the role of farmer identity in agricultural decision-making. This process of continual rediscovery and relabelling does not allow for any progression of theory.

It is interesting that, while identity does not seem to have been the focus for research into farmer behaviour, it is a relatively common framework for investigating the role of farmers' wives. This discrepancy probably arises from the different historical development of these two fields. Whereas investigation of farmer behaviour has mainly derived from the satisficing approach, which itself emerged from dissatisfaction with economic models, the emerging study of women in farming has instead been largely associated with research into gender roles, gender relations, and the development of feminist theory (Little, 1991). Questions of identity have played a significant role in feminist issues (Bondi, 1993). Thus, these approaches have followed their parent disciplines of sociology and anthropology in viewing people and actions as elements within social relations (Emerson, 1976), rather than the independent, rational decision-makers the economic and satisficing models prescribe. There are a multitude of studies examining the role of women in farming ranging from, for example, the role of farm-wives as business managers (Hastings, 1987-88) and the subordinate nature of women's

roles in agriculture (Stebing, 1984; Gasson & Winter, 1992) to the gender division of labour roles and decision-making (Sawer, 1973; Darques, 1988; Whatmore, 1991).

Perhaps, given their emphasis on role and identity, it is not surprising that one of the most comprehensive identity-based conceptual frameworks applied in an agricultural context has been developed with respect to the self-identity of farmwives - namely, Bokemeier & Garkovitch's (1987) study of farming womens' identity in Kentucky. Bokemeier & Garkovitch recognised that the social-psychological underpinnings of women's work roles have received little attention in the literature, to the extent, they assert first, that "no attempt has been made to determine the relationship between involvement in farm work and how farm women define their self-identity" (P15), and second, that "no one has identified the components of the social identity labelled 'farm women', determined the factors that contribute to the construction of this self-identity, or assessed the means by which this identity is actualised in role performances and decision making" (P19). To remedy this situation, the study presented a theoretical framework to investigate the relationship between the farmwife self-identity, labour and authority divisions, and structural features of the farm. As with Coughenour's theory, the framework is constructed along similar lines to the symbolic interactionist perspective. The authors propose that "Women's self-identities influence their perceptions of an appropriate role performance as a 'farm woman' and definitions [i.e. symbolic meanings] of activities (household, off-farm, and farm) encompassed by this role location." (P19). Results of a multiple classification analysis suggested that self-identity was more important in accounting for variations in women's task involvement on the farm than any other single factor, including the structural characteristics of the farm enterprise.

If farm women's self-identity is an important factor in accounting for behaviour on the farm, it is reasonable to propose, particularly with the weight of evidence in social psychology indicating the importance of the identity construct, that identity plays an equally important part in farmer behaviour. Recognition of the importance of farming culture in determining response to agri-environmental schemes supports this assertion. Young *et al.*'s (1995) 'sub-cultures' are the equivalent of what symbolic interactionists term 'identity groups', as, in both cases, the feature that distinguishes 'groups' or 'sub-

cultures' is their shared meanings of events and objects. While Young *et al.* (1995) suggest that 'culture' is simply used as a justification for action, there has been much research conducted suggesting that 'identity' is an important antecedent to behaviour as the individual tries to maintain their self-image in the eyes of the group. Farmers' self-definitions may thus play an equally important role in determining enterprise activity as self-definition does for the farmwife's task involvement; a position supported by identity-based agricultural research (e.g. Weerdenburg, 1973; Coughenour, 1976; Salamon, 1985; Higgins & Seabrook, 1986; Shucksmith, 1993; van der Ploeg, 1993).

4.4 Developing a conceptual framework

The requirement is thus to develop an approach for investigating the influence of farming identity sub-culture on decision-making. In behavioural geography, concern with elements of human behaviour has traditionally led to the adoption of theory from other disciplines with an empirical content, notably sociology and psychology (Johnston, 1979; Gold, 1980; Gregson, 1986; Spencer & Blades, 1986). Rather than further development of a previously used approach such as Shucksmith's (1993) investigation of *habitus*, the proposal is to adopt concepts from social-psychology previously developed to investigate the link between self-identity and behaviour. An advantage of not using the *habitus* concept (or any of the other cultural frameworks described above) is that it tends to simplify the self as consisting of a single individual with a single disposition to act. Whereas, as Stryker (1981) suggests, the most commonly held conceptualisation is of a self that is internally structured to reflect the structure in society - comprised of multiple identities. An additional advantage is that the field of research into the link between self-identity and behaviour is more advanced in social psychology. Thus it may be possible to base the conceptual framework around pre-existing theory by borrowing concepts from sociology and psychology, as was common practice until the dissipation of behavioural geography in the 1970s (Kitchen *et al.*, 1997).

4.4.1 Sheldon Stryker's identity theory

There are a number of theories investigating the link between self-identity and behaviour in the field of social-psychology, in particular *social identity theory* (Hogg &

Abrams, 1988), *situated identity theory* (Alexander & Wiley, 1981), and *identity theory* (Stryker, 1968). Of these, social identity theory and situated identity theory deal primarily with behaviour within a direct social context. In contrast, Sheldon Stryker's *identity theory* proposes a means of investigating the relationship between identity and behaviour that may be more applicable to the Marston Vale study. Stryker's objective in devising *identity theory* was to clarify some of the ideas of Mead (1934) and translate them into terms with clearer empirical refinement (Stryker, 1994). Consequently, identity theory derives from the same social-structuralist perspective of symbolic interactionism outlined in Section 4.3, and, in fact, provides an empirical test of some of the concepts. Stryker focuses on two specific aspects responsible for behaviour; the salience of the identity in the identity hierarchy and the degree of commitment expressed by the individual to the roles performed by the identity group (sub-culture or culture). The model as originally conceived by Stryker (1968) is depicted in Figure 4.1.

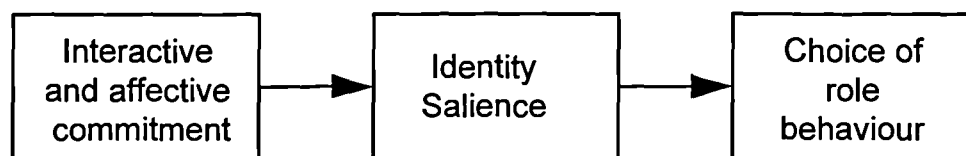


Figure 4.1: Relationship between commitment, identity salience and role.

While identity theory attempts to clarify the relationship between self-identity and behaviour, it does not seek to explain all behaviour, but concentrates on role-behaviour where the individual is able to choose between alternative courses of action (Stryker & Serpe, 1982; Serpe, 1987). Thus, identity theory is - to use Stryker's terms - a "*limited*" or "*minimalist*" theory, utilising the 'identity' aspect of the self concept to provide an explanation of why, when choice is available, one role is chosen for expression rather than another. It may be conceived of as an "attempt to explain as much as possible with as few concepts as possible" (Stryker, 1989: P48).

In Stryker's model, commitment to a particular identity represents the effect on meaningful social relationships were a person to follow a different course of action

(Stryker, 1968,1987). Losing important relationships would have the effect of reducing identity salience and consequently lead to less time spent pursuing behaviour linked to that identity structure. Stryker divides commitment into affective and interactional forms. *Affective commitment* is the affect attached to the potential loss of relationships and activities on departure from a given role (Stryker, 1987) - described as the intensiveness of commitment by Serpe (1987). It represents the level of investment an individual has placed in a particular identity. Affective commitment has a strong impact on identity salience and may work independently of interactional commitment (Serpe, 1987; Stryker & Serpe, 1994). Even if interactional opportunities are unavailable, identity salience may be high in situations where (a) strong positive affect is felt for the identity group, and (b) the individual retains the hope of *forming interactional* commitments with members of the group (Stryker, 1987). In contrast, *interactional commitment* refers to the number of social relationships that would be lost on departure from a given role (Stryker, 1987). It represents the outcome of commitment to an identity as there is a positive relationship between commitment to an identity and the extensiveness of the social network. Of the two dimensions, interactional commitment has the lesser effect on identity salience (e.g. Stryker & Serpe, 1994) and inevitably increases the identity's salience whether or not there is great emotional attachment (Stryker, 1987). For example, commitment associated with an occupation performed out of necessity rather than a preferred occupation will still increase the salience of that identity. When the two dimensions of commitment reinforce each other, identity salience can be particularly strongly enhanced (Stryker, 1987).

Stryker's contention is that where commitment is high, so is the salience of the identity as individuals who are committed to particular identity groups are likely to see themselves as belonging to the groups. Support for the link between commitment and identity salience can be found in the work of Jackson (1981), whose index of commitment showed a high correlation with the salience of the identity. The bulk of support for this concept, however, comes from direct tests of the identity theory model itself, which have consistently detected a relationship between commitment and salience (e.g. Stryker & Serpe 1982, 1994; Nuttbrock & Freudiger, 1991; Shamir, 1992).

The effect of identity salience on behavioural outcomes, such as the amount of time spent in role, is well established (Stryker & Serpe, 1994). For example, Stryker & Serpe (1987) looking at religious role performance found a strongly significant relationship between the religious role salience and the amount of time spent in religious activities. Hoelter (1983) and Stryker & Serpe (1994), in separate studies of college student identity, found that the time spent in academic, athletic/recreational, extracurricular, friendship or personal involvement, religious (Hoelter only) and dating roles was again dependent on the salience of the identity. In a study of blood-donor identity, Callero (1985) found that individuals with a high identity salience were likely to have both a greater number of friendships linked to blood donating and to donate blood more regularly.

Direct links between identity salience and role-behaviour are in two main areas. First, identities at the higher levels in the hierarchy are more likely to be used for making behavioural choices than those at the lower end as they have a lower threshold for evocation (Stryker & Serpe, 1982; Stryker, 1987; Serpe, 1987). Identity salience thus increases the probability that an individual will perceive a situation as suitable for playing the salient role. Secondly, identity salience increases the motivation of individuals to locate opportunities to express the identity (Stryker, 1987). Rather than playing the role when it is required, they seek to express an idealised image of themselves by deliberately displaying behaviour consistent with an identity they are more familiar with. This may also occur when an individual is unable to adequately perform an expected role - they assert another less appropriate identity rather than display ineptitude. For example, a farmer who is ineffective at keeping accounts is likely to emphasise, when the situation demands, that he/she is a farmer and not an accountant - or alternatively, apportion that role to the spouse. In cases where strong conflict between identities is evident, negative feedback can serve to enhance self-esteem as the individual seeks to be distinguished from what may be considered a 'counter-identity'.

4.4.2 A conceptual framework for investigating identity-related agricultural decision-making

While Stryker's model shown in Figure 4.1 provides the basic framework for empirical tests of 'identity theory', it is important to remember that the objectives of the model

were limited to explaining the specific question of why one role-behaviour is selected over another. The concepts made measurable in the theory concern neither the cognitive means through which identity salience influences role choice nor how behaviour may reciprocally affect commitment and identity salience - yet these are important considerations when investigating the effect of culture and/or sub-culture on decision-making. Of particular importance is the question of how role-behaviour is assessed by both the individual and society and how this in turn affects identity salience and behaviour. It is in this area that resistance to role change is likely to occur as farmers reject roles that are unacceptable to their current self-identity.

In terms of the link between self-identity and behaviour, the problem is that the association between identity and behaviour is an extremely complex one (Turner, 1978). The most likely explanation appears to be that self-identity can affect attitudes and attitudes in turn (as evaluations with behavioural implications) influence the selection of role-behaviour. There is strong evidence of an important link between attitudes and the self concept - attitudes can either reflect the true self-image or may be used in role playing to reinforce a positive self-image reflecting an ideal (Dovidio & Fazio, 1992). Bonninger *et al.* (1995) suggest that the relationship between attitude and behaviour is stronger where the individual perceives the interests of a personally important identity group are at stake. Some even conceive of the self concept as being constructed of a series of attitudes towards the self (Burns, 1979; Pratkanis & Greenwald, 1985). Burns (1979) notes that "From a variety of different sources the view promoted in this book [*The Self Concept: Theory, Measurement, Development and Behaviour*] that the self concept is best regarded as a dynamic complex of attitudes is given consistent support" (P57).

Studies centred on attitudinal models have shown that self-identity, in specific situations, may constitute an important antecedent to behavioural intentions and thereby behaviour. For example, in a study of voting behaviour in the US and Sweden, Granberg & Holmberg (1990) found that, for people with a strong self-identity, self-identity was a reliable predictor of behaviour. Charng *et al.*'s (1988) study on blood donating found similarly that the degree to which the role had become incorporated with the person (included in the identity) was a consistently strong predictor of donating activity. In

another approach - using the Fishbein-Ajzen (1975) model - Biddle *et al.* (1987) demonstrated that school identity adds significantly to attitudes and personal norms in predicting intentions to continue with school. These in turn are the best single predictor of actual school continuation.

A further possibility involves the link between identity and behaviourally-relevant attributes of attitudes themselves, specifically attitude strength. Boninger *et al.* (1995) looked at the relationship between social identity and behaviour via its influence on attitude importance and found that social identity (along with the other variables of self-interest and value-relevance) has a significant impact on attitude importance. It is proposed that the importance of the attitude is regulated by the salient social identity at the time the decision is made. Important attitudes are thought to have a strong influence on behaviour because they are more accessible than unimportant attitudes - thus the likelihood of the attitude being activated on encountering an attitude object is increased (Eagly & Chaiken, 1992 - also see Krosnick *et al.*, 1993).

In terms of the reciprocity of the relationship between identity salience and role-behaviour, Stryker (1986: P94) suggests that the mechanism linking the two is *self-esteem*:

“Role-performances are subject to self-evaluations by the performer, and subject to evaluations by others in conjunction with whom the performance is played out as well as by significant others external to the performance (e.g. student, parent, teacher). These evaluational processes are reflected in the person’s role-specific self-esteem; and the role-specific self-esteem is reflected in identity salience in accord with the principle that the higher the role-specific self-esteem attached to a role, the more salient the identity based on that role.”

If role-behaviour is motivated by the concern to maintain one’s self-image in the eyes of one’s peer group, then individuals require a mechanism of reassuring themselves that the role performance is appropriate. In this way, confirmation of role-behaviour (or display of appropriate significant symbols) leads to increased saliency of the identity. This position is also maintained by the proponents of *social identity theory*, who argue that reinforcement of self-esteem is essential to maintaining the salient identity in a

group situation and is therefore a fundamental human motivation (Hogg & Abrams, 1988; Ethier & Deaux, 1994). Thus appropriate role- behaviour provides the individual social status within the identity group and therefore maintains their commitment to the group and the salience of the identity. Conversely, failure to perform appropriate roles will result in lower social status and therefore lower role-specific self-esteem.

Through this discussion of the wider context of identity theory a broader theoretical framework incorporating Stryker's ideas can be proposed for the investigation of farmer behaviour in the Marston Vale. This identifies commitment, identity salience, behaviour, the display of significant symbols, obtainment of social status, and self-esteem or satisfaction as the most important aspects *for an investigation of farmer identity*. The general conceptual framework is presented in Figure 4.2.

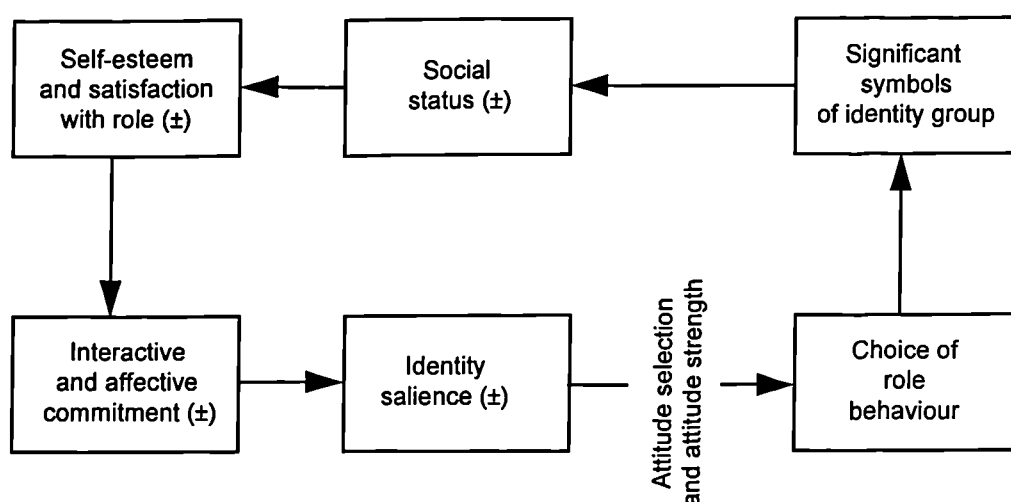


Figure 4.2: Development of Stryker's model to provide a more general conceptual framework for the investigation of farmer identity.

One important point to note is that *it is not the intention of this study to conduct an empirical test of identity theory*. Previous research involving the direct application of the theory has done so for the express purpose of testing Stryker's contention that it provides a tractable measurement of some of the concepts of symbolic interactionism. As all evidence supports Stryker's general contention of the relationship between commitment, salience and role-behaviour (e.g. Stryker & Serpe 1982, 1994; Nuttbrock & Freudiger, 1991; Shamir, 1992), it is reasonable to accept the basic concepts and to

utilise them to construct this more general conceptual framework to investigate the influence of self-identity on farmer behaviour. The framework is used in the study to *guide* the investigation of how self-identity influences behaviour, by using a combination of both empirical (quantitative) and qualitative methodological approaches rather than converting the propositions of the model into a series of measurable concepts as in Stryker's theory. In particular, dealing with the symbolic aspects of identity expression, status acquisition and self-esteem requires a more investigative approach than that used by Stryker.

The conceptual framework in a farming context

It has been established from the literature that there may be four farming role-related identity sub-cultures within the wider farming culture, specifically; the traditional/conservative identity, the agribusiness/commercial identity, the diversifier/entrepreneur identity, and the conservationist identity. Further, it is suggested that these four options represent the alternatives for the development of agriculture in the post-productivist period (e.g. Marsden *et al.*, 1986; Ilbery *et al.*; 1996). The position of the Marston Vale close to markets and within a Community Forest zone leaves all four possible options available to the farming community. Identity theory would suggest that farmers' behaviour in response to the Community Forest proposals is likely to be in accordance to their existing 'sub-culture' or 'farmer type'. For farmers within identity sub-culture groups that consider diversification as an acceptable form of land-use this may be a viable alternative. For example, for diversifier farmers displaying symbols of diversification may generate positive social status and thus self-esteem for the individual. However, for a farmer who sees himself as 'traditional' reducing commitment to the agricultural role may be - as Shucksmith, 1993, suggests - 'unthinkable'. Display of a reduction of commitment to farming may result in the lowering of his/her standing amongst other 'traditional' farmers and result in negative self-esteem being generated. Thus there may be strong cultural resistance to diversifying from the 'traditional' role.

By investigating the identity of individual farmers it may thus be possible to obtain a picture of how the Community Forest proposal is likely to develop in the future - i.e. the

likely farmer response to the overtures to become tree-planting, leisure providing entrepreneurs. Further, investigating the symbolic importance of both woodland and the current farming practices it is intended to replace will contribute to an understanding of why farmers' cultural resistance to the role changes is so intense. In terms of applying the theory, there are a number of questions relating specifically to the nature of the farming culture. In particular, do the hypothetical identity 'sub-cultures' have any meaning within the farming community itself, i.e. do farmers apply self-labels to themselves that coincide with the existing typologies? Can role-based identity types be detected within the Marston Vale Community Forest zone - and do these groups have different perceptions of the appropriate role of a 'good' farmer? Through following the conceptual framework outlined in this chapter, an investigation into the effect of self-identity on agricultural decision-making in the Marston Vale is proposed.

4.5 Summary

This chapter has outlined a cultural approach to investigating agricultural decision-making within the general framework of behavioural geography. The conceptual framework focuses on the importance of farmer self-identity in determining role choice, and suggests that commitment to being a certain type of farmer may result in 'identity resistance' - a reluctance to change to adopt roles that do not concur with their existing self concept. The symbolic interactionist perspective that all behaviours are to some extent symbolic suggests that changes proposed by the Community Forest may have more than economic consequences as they may restrict farmers' ability to project their self-identity through role-behaviours. It is proposed that the concepts of commitment, identity salience, role-behaviour, significant symbols, social status, and satisfaction/self-esteem as a farmer may provide a framework around which to base a broader study of cultural resistance to the adoption of the Community Forest scheme in Marston Vale. The following chapter proposes a methodology for the investigation of the role of self-identity in determining decision-making in the Marston Vale based around this conceptual framework.

Chapter 5: Methodology: Investigating farmer self-identity in the Marston Vale

5.1 Introduction

In the previous chapter a theoretical framework for the investigation of identity-related behaviour was proposed based on a central contention that farmers act in a way that is consistent with their self-concept. Through the development of this framework, the first objective of the study has been achieved (see Chapter 1). What is required now is a methodology to apply the model proposed in the conceptual chapter to the farming community of Marston Vale. There are two main areas of investigation required, corresponding to the second and third objectives of the study.

First, while the literature suggests there is likely to be four main farming types, there has been no investigation of whether these groups are recognisable to farmers within the farming community themselves. If it can be demonstrated that (a) these groups based on observed farm features represent role-behaviour defined identity sub-cultures, and (b) farmers label themselves (i.e. as ‘conservationist’, ‘agricultural producer’, ‘agribusiness’, ‘diversifier’) according to these role-defined groups, and (c) that these self-labels (self-identities) are related to behaviour; then grounds are provided for suggesting that self-identity may influence decision-making in the Marston Vale. This requires a quantitative farm survey using the instruments devised by role and identity theorists to measure identity salience, commitment, and role-behaviour - in addition to developing a means of categorising farmers into identity groups on the basis of their preferred role-behaviours. Further, to confirm the validity of the classification, background information is required concerning various aspects of their current approach to farming, farming in the past, and intentions for the future development of the farm. The approach used for this investigation, beginning with the preliminary survey required to develop reliable and valid measures of the constructs, is laid out in the first part of the chapter (Section 5.3).

The second part of the investigation aims to develop a greater understanding of what it means to be a 'farmer', whether/how this differs between the four identity sub-cultures, and whether/how this is likely to affect farmer participation in the Community Forest scheme. Following the conceptual framework, particular emphasis needs to be applied to (a) the role of woodland as a significant symbol of farming ability, and (b) how woodland, diversification and leisure provision may interfere with the acquisition of self-esteem, status and/or satisfaction with farming. Unlike the more structured areas of self-identity and role, investigating meaning requires a more flexible qualitative approach - and, consequently, a series of follow-up in-depth interviews. The methodology applied for the conduct and analysis of this qualitative survey is discussed in the second part of the chapter (Section 5.4).

In addition to these major objectives, a brief (one page) postal questionnaire survey of Community Forest project directors was conducted to obtain information about the development of the Community Forests and aid in the construction of the main questionnaire. The methodology followed for the postal survey is outlined in Section 5.2 before discussing the main methodological procedures.

5.2 The Community Forest directors' questionnaire

Prior to the application of the farmer surveys, a brief postal questionnaire survey of the directors of the Community Forests was conducted in November, 1995 (see Appendix iii). The main objectives of this survey were (a) to provide up to date information on the progress of the Community Forest for use in the literature review section, (b) to obtain an assessment of the success of the Community Forest scheme from sources within the Community Forest, and (c) to obtain comment on Williams *et al.*'s (1994) and Allison's (1996) contention that farmers desire to be 'farmers, not foresters' underlies the slow rate of progress. The questionnaire asked four basic questions: (1) "Have there been any farm-based leisure activities opened within the Community Forest since its establishment?" and, "Are any planned?", (2) "How do you believe the uptake of the forest is progressing since the forest was first conceived?" [7 options from 'much faster than expected' to 'much slower than expected'] and, "Why do you say that?", (3)

“What are the most common reasons given by farmers for planting trees?”, and (4) a question asking for their assessment of the statement that ‘we are farmers, not foresters’ in terms of its implications for Community Forest development, and how they think farmers may be convinced to become foresters. Responses were received from all twelve Community Forests. Data on the establishment and uptake of the Community Forest scheme were collated and all open responses recorded for use in the literature review chapters. In addition, some of the comments - in particular the reasons farmers were planting trees and the ways they believed farmers could be convinced to become foresters - were used to assist in the construction of the quantitative questionnaire.

5.3 The main Marston Vale survey - development and measurement of the constructs

5.3.1 The preliminary investigation

To construct the Marston Vale questionnaire, a preliminary survey was conducted in a farm district adjacent to the Community Forest area. While preliminary studies should technically be conducted using members of the sample population under investigation (Moser & Kalton, 1971; De Vaus, 1991; Breakwell, 1995), this was not possible as the Marston Vale farmers were to be investigated using a census approach, and thus repeat selection would have been inevitable. The Ouse Valley area selected for the preliminary study borders the Marston Vale on the north-west (clay ridge) boundary. Both areas have similar topographies, land grade classifications and land-use patterns. Thus, while the preliminary survey of farmers was not from the Marston Vale Community Forest zone itself, they are assumed to be members of the same population. A contact made with a former Bedfordshire NFU representative supplied a list of farmers within the Ouse Valley Nitrate Sensitive Area, and this list was to provide the respondents for the preliminary survey. In total fourteen farmers were interviewed, the interviews lasting for between an hour and an hour and a half.

Construction of the role-behaviour index

Of primary importance in the preliminary survey was the selection of behavioural items for the ‘role-behaviour index’. Stryker’s theory suggests that identity is a social position

to which patterned behaviour or roles are attached - it is comprised of a series of *shared behavioural expectations*. As outlined in the theoretical framework, these behaviours can either be positive roles (e.g. things farmers with identity X do) or counter-roles (e.g. things farmers with identity X do not do). This structure of role and counter-role enables all behaviours to be evaluated on a bipolar scale of preferred frequency of role performance. For example:

Do you always have nature conservation as the number one priority on the farm?

Always 1 2 3 4 5 6 7 8 9 Never

A farmer who considers him/herself to be a conservationist is likely to respond by indicating that the role should be performed frequently - whereas a farmer who labels him/herself as an agribusinessman (where more profit-oriented roles are emphasised) is likely to suggest that this should not be performed frequently. Similarly, if a question was asked “*Do you always have profit as the number one priority on the farm?*”, it may be expected that the business-oriented farmer will indicate towards the ‘Always’ end of the scale and the conservationist towards ‘Never’. If traditional farmers are also examined, and an item included such as “*Do you always respect traditional values in your management decisions on the farm?*”, the response may show that conservationist farmers are ambivalent on the issue and agribusiness farmers do not think this is a role that should be performed frequently, whereas traditional farmers believe it should always be a consideration.

The role-behaviour index seeks to classify farmers into identity types by presenting a series of roles recognisable as typical of the identities under investigation and asking farmers to evaluate these on the basis of preferred frequency of performance. As the above description suggests, if there are separate farming identities centred around the hypothesised ‘agricultural producer’, ‘agribusiness’, ‘conservationist’ and ‘diversifier’ types, there should be a pattern of response to roles and counter-roles that is consistent within each identity group, enabling farmers to be classified through the application of a clustering procedure. The result of this process will be a typology based directly on how the farmer perceives his/her role as a farmer. As discussed in the literature review

chapters; in situations when farmers are faced with substantial changes in their role (as is the current situation), this self-perception may have a strong influence on behavioural choice.

To construct the index required the identification of five role-behaviours representative of each identity group. Items for evaluation in the preliminary survey were drawn from a variety of sources including the existing literature on farmer goals, values and attitudes (In particular: Gasson, 1973; Flinn & Johnson, 1974; Newby *et al.*, 1977; Patrick & Kliebenstein, 1980; Ilbery, 1985; Carr, 1988; Shucksmith *et al.*, 1993; Lemon & Park, 1993; Williams *et al.*, 1994) and the results of the survey of Community Forest managers. Following the establishment of a potential role-behaviour list (56 items), an established local farmer and former NFU representative was consulted for advice over the suitability of the items, and a process of refining the item wording and content was conducted under his instruction. To establish the appropriate items for the index, farmers were asked to evaluate whether they believed the items were typical of 'conservationist', 'agribusiness', 'diversified' or 'traditional'¹ farmers. Provision was made to enable them to specify more than one type of farmer in order to distinguish roles which were perceived as common to all groups. The interview and evaluation was conducted in a consultative fashion with farmers encouraged to comment on the wording of the items, their suitability, and to offer alternative suggestions. A similar approach was used by Walter (1997) to construct an index of 52 statements of farmer success.

Analysing the results for each role involved tallying the number of farmers who had indicated identity X and dividing by the total number of farmers in all groups for that role. High values suggest that the role is characteristic of the identity, whereas a low value would suggest that the role may not be able to distinguish between identity groups. Behavioural items with the highest values for the respective identity groups were selected for inclusion in the index. The final selection of roles is shown in Table 5.1.

¹ The 'traditional' farmers category was later changed to 'agricultural producers' on the advice of farmers in the preliminary survey because the term 'traditional farmers' within the farming community refers to farmers who follow 'old-fashioned' farming practices. Whereas, in the study the term was to mean 'farmers who wish to maintain their agricultural role'.

Agricultural producer (traditional) Roles

1. Encourage your children to become farmers
2. Involve your family in the running of the farm
3. Farm in a manner that will leave the farm more productive than when you started farming it
4. Farm in a manner that respects the traditional farming values
5. Regard farming more as a life-style than a business

Agribusiness Roles

1. Take any opportunity to increase your farm size
2. Invest any surplus profits into non-farming enterprises such as the stock market
3. Use as much new technology as you can afford (e.g. computers, mobile phones)
4. Have maximising profit as the number one priority in decision-making
5. Borrow capital to invest in the agricultural side of the farm²

Diversifier Roles

1. Look to learn new business skills not connected with agriculture
2. Make extra income through on-farm diversification schemes
3. Mix with a wide range of urban people³
4. Experiment in your land use decisions
5. Use or establish woodland for commercial purposes

Conservationist Roles

1. Have nature conservation as the number one priority in decision-making
 2. Create new wildlife habitat
 3. Use environmentally friendly farming practices
 4. Listen to the advice of environmentalists
 5. Preserve existing hedges and wildlife habitat
-

Table 5.1: Role behaviours selected to represent the four identity groups.

The second objective of the preliminary study was to test the questionnaire for question comprehension, redundancy and non-response as recommended by De Vaus (1991). Of particular concern was reaction to the psychometric testing. While psychometric measures are not uncommon in agricultural research and have met with some success - particularly in the application of Fishbein & Ajzen's (1975) *Theory of Reasoned Action* (Tait, 1983; Carr, 1988) - there was concern that asking questions such as "How important are the following identities to your feelings about yourself?" and then asking

² 'Agricultural' was specified to avoid confusion with borrowing for diversification projects.

³ The value of including this item is questionable as most farmers in the area, which is heavily populated, had considerable contacts with the urban communities. Other than diversification itself, roles attributable solely to diversifiers are difficult to determine because the purpose behind diversification is often simply to support the agricultural side of the business.

them to rate it on a scale from “Important to who I am - Not important to who I am” may produce a somewhat bemused response. Evidence exists that results from scaled techniques are not as reliable for the general population as for the student populations commonly used in social-psychology research (Schumann & Johnston, 1976). Through a process of observation and inquiry, it was established that the measures were generally comprehensible to the respondents. However, the identity salience and commitment measures required explanation, particularly in the difference between the two identity salience measures and for the measure of interactive commitment (see Section 5.3.2).

5.3.2 The main quantitative survey - investigating structural aspects of farming in Marston Vale

5.3.2.1 *Questionnaire construction*

The questionnaire survey was designed to meet five main objectives: (a) to apply the role-behaviour index and measures of identity commitment, salience and behaviour, (b) to gather information on the Marston Vale farmers’ general approach to farming and response to the agricultural crisis, (c) to gather information about their attitudes and response towards the Community Forest scheme and woodland in general, (d) to act as an initial contact point for farmers to be interviewed for the qualitative study, and (e) to gather as much qualitative information about farming and farmer identity in the Vale as possible. The questionnaire itself was divided into six sections covering different areas of investigation (see Appendix iv).

Section one

This section provides basic information about the structure and history of the farm and farm family. It includes questions about farm size and changes in farm size, the structure of the decision-making environment (whether the family or others are involved in decision-making and how long the respondent has been involved in farm management), the history of family occupancy on the farm, and a question about the farmer’s information environment (the importance of various sources of information on farm management). The information is important both from the perspective of its influence on farm management decisions and its utility as a behavioural indicator. For example,

farmers adopting an agribusiness approach may be expected to use management consultants and maintain larger farm sizes than other farmer types (Shucksmith, 1993).

Section two

Section two examines the creation and management of farm woodland in the Marston Vale. Two questions were directed at the farm family's historical experience with woodland, in particular the history of woodland management and woodland planting. These questions were included to gauge whether farmers with a family history of woodland planting or management were more likely to include woodlands in their management strategy. Research has suggested that a lack of family history in woodland planting and management may be partially responsible for the slow uptake of forestry schemes (Williams *et al.*, 1994; Gasson & Hill, 1990). In addition to the woodland questions, farmers were also asked about their hedge planting and removal activities over the last 15 years and their plans for the next 5 years. This was largely to act as a behavioural indicator, as farmers' approaches to their hedgerows have been found to differ between traditional approaches to farming, where hedges are retained (Battershill & Gilg, 1996) and highly industrialised forms of agriculture where extensive lengths of hedge may be removed (Young *et al.*, 1995).

Section three

Section three focuses on farm adjustments over the last ten years and intentions for the future. Of particular concern is farm diversification. Diversification is widely accepted as playing an important part in the future development of agriculture in Britain (e.g. Slee, 1987; Bryant & Johnston, 1993) and plays a crucial role in the Community Forest team's strategy of encouraging diversification schemes that involve using woodland products (MVCF, 1995). It is also important from an identity perspective because of its symbolic meaning as an indicator of a 'failed farmer' as was the common perception in the past (Blunden & Curry, 1990), or, for farmers who embrace diversification on more profitable economic grounds, it may indicate ability as a businessman. In this section farmers were asked to list their diversification schemes and the proportion of their farm income derived from them. Additional questions about recent (post-1987) and future

diversification projects have the objective of revealing whether the push for diversification decreased with the improvement of wheat prices in the early 1990s.

Questions were also asked about possible moves to intensify production in the future as well as the creation of any purpose-built environmental projects on the farm (substantial projects as opposed to planting a few trees). It is envisaged that farmers with a more conservationist identity are more likely to have engaged in a conservation project and the agribusiness-oriented farmers are more likely to intend to intensify agricultural production on the farm. Finally, farmers were asked to indicate on a semantic differential scale ranging from 'more' to 'less' whether their overall management approach has changed since 1987 in terms of becoming more or less (a) conservationist, (b) diversified, and (c) businesslike.

Section four

The fourth section focuses on land-use constraints - specifically, systems of tenure, local planning regulations, and indebtedness. These constraints were tested under the hypothesis that tenure systems, planning regulations and debt may prevent farmers from expressing themselves fully in their development of the farm. While in theory farmers are legally entitled to plant trees on tenanted land, farm woodland planting has been actively rejected by the major agricultural landowners in the Marston Vale. Reluctance to increase indebtedness has also been suggested as an inhibitor of diversification (Ilbery, 1992) and conservation (Potter *et al.*, 1991) plans of farmers, as it reduces both their ability to borrow capital to diversify and willingness to take land out of production for conservation. For example, Gasson & Hill (1990) found that the FWS was attracting a number of farmers who would have liked to plant trees but without the grant were financially unable to do so.

Section five

Section five involved the application of the identity salience, commitment and behavioural measures. To recap on the previous chapter: the conceptual framework proposes that commitment affects identity salience which in turn affects the choice of

role-behaviour. Thus, to apply identity theory required the development of measures to look at each of these factors.

1. Measuring role-behaviour

There have been four procedures used to measure time-in-role in previous studies of identity theory: an estimated measurement of hours per week spent in role (e.g. Stryker & Serpe, 1982; 1994; Shamir, 1994), an estimated frequency of role performance measure (e.g. “never”, “occasionally”, “regularly” - Bokemeier & Garkovitch, 1987), a ‘personal sacrifice’ scale measuring how much time respondents believed they should ‘sacrifice’ to a particular role (Nuttbrock & Freudiger, 1991), and a *direct measure of* past behaviour (for example, the number of times respondents had donated blood - Callero, 1985). The majority of studies have used either the estimated time in role approach e.g., “How many hours in an average week do you spend in doing things related to [named identity under investigation]?” (Stryker & Serpe, 1982: P211). For the Marston Vale study, time in role was measured through the application of (a) the role-behaviour index, which constitutes an adaptation of Nuttbrock & Freudiger’s (1991) ‘personal sacrifice measure’ (as well as providing a means of clustering individual farmers into identity types), and (b) the behavioural measures of past agricultural activities.

For the role-behaviour index (see Section 5.3.1) farmers were presented with the randomised list of the 20 role-behaviours and asked to indicate on a linear scale how frequently they believed they ought to perform the roles. The ‘preferred frequency of role performance’ was measured between the points of ‘never’ to ‘always’ because, although ‘always’ does not appear to be an appropriate term for every item (e.g. A farmer cannot ‘always’ be encouraging his/her children to become farmers), it overcomes the problem that people’s definitions of “frequently” (used by Nuttbrock and Freudiger, 1991) and “regularly” (Bokemeier & Garkovich, 1987) - may vary. In effect what the ‘always’ refers to is ‘as often as the situation arises to perform the role’, a meaning that ‘frequently’ does not offer.

Behavioural measures included conservationist, diversified, agribusiness and traditionally oriented aspects of the farm, for example, the existence of conservation schemes, the existence of diversification schemes or farm size (see above). Although the behavioural evidence does not constitute a direct measure of time in role, correlation should be evident (as proved the case with Callero's (1985) study on the blood-donating identity) because farmers who pursue the role activity with greater frequency are more likely to possess tangible evidence of role performance. This measure encounters the same problems of relating attitudinal data with behaviour in that the larger the gap between the behaviour and the measurement of behavioural precursor - in this case self-identity - the greater the potential disparity between the two (Fishbein & Ajzen, 1975; Baggozi, 1981). However, there is reason to suppose a closer relationship exists between behaviour and identity over an extended temporal period because of the nature of the identity construct. Identity is renowned for its "durability and permanence" (Harvey, 1993, P59), whereas research suggests attitudes are relatively transient (Eagly & Chaiken, 1992; Fishbein & Ajzen, 1975).

2. Measuring affective commitment

While there have been attempts in the past to develop standardised approaches for the measurement of commitment (e.g. Mowday *et al.*, 1979), there are still few definitive guidelines on procedure. In studies of identity, scales and instruments appear to be developed on a largely ad hoc basis in response to the requirements of an investigation, with the most common approach being the development of multi-item scales ranging from one item (e.g. Hoelter, 1983) to upward of 15 items (e.g. Mowday *et al.*, 1979; Jackson, 1981; Santee & Jackson, 1979). Regardless of the number of items involved, the central requirement of an affective commitment scale is that it measures either the importance of being involved in a particular identity group or relationship, or, alternatively, the sense of loss on exclusion from that group or relationship. For example, Stryker and Serpe (1994: P27) ask the question "How important is it to you that your (parents, best friend) view you as being involved in (activities related to a given role)?" Similarly, Callero (1985) created an 8 item social commitment scale (later used by Shamir, 1992), in which he asked respondents to evaluate on a 7 point strongly

agree/strongly disagree scale, amongst other items “It is important to my friends and relatives that I continue as a [role-identity]” (P209).

While there are many other measurement items of affective commitment that may be included in the multi-item scales (For examples see Santee & Jackson, 1979; Jackson, 1981; Stryker & Serpe, 1982; Shamir, 1992) and even alternative measures, particularly behavioural measures (i.e. level of adherence to a group or relationship, e.g. Nuttbrock & Freudiger, 1991), the measurement of affective commitment was restricted to a two item scaled appraisal in the Marston Vale study. The first question “How important is it to you that your friends and family view you as behaving in the following manners: as an a) agricultural producer; b) agribusinessman; c) nature conservationist; d) diversified farmer/small business entrepreneur?” (scale: very important they do - very important they don’t) (see Appendix iv) was essentially the same measure used by Stryker & Serpe (1994); however, the second item “In general, how do you think your friends and family would react if you adopted the following management strategies: a) Ran the business along strongly commercial lines, as an agribusiness; b) Rely completely on agricultural production (cropping etc.) for income; c) Rely heavily on diversified projects and/or off-farm income to keep the farm profitable; d) Rely heavily on government conservation schemes to keep the farm profitable” (scale: strongly approve - strongly disapprove), followed one of the items from Callero’s (1985) social commitment scale “It really wouldn’t matter to most people I know if I decided to give up (role-identity)” (P209). The final measure of affective commitment was calculated by summing the results of the scales for each of the four identity groups.

3. Measuring interactive commitment

Interactive commitment is a measure of the number of relationships the individual has with members of the particular identity groups, i.e. how many important relationships could be lost should the individual cease to perform roles associated with the group. The approach to measuring interactive commitment is more straightforward as it involves simply quantifying the number of social contacts individuals maintain with each identity grouping. For example, Serpe’s (1987: P47) measure of interactional commitment was to simply ask the respondent “How many of the people you have met through (one of

the identities) have become friends?” Although some studies have used additional questions regarding membership of organisations allied with the particular identities (e.g. Stryker & Serpe, 1994), the majority of studies exploring identity theory have either used only the single measure of interactional commitment (e.g. Serpe, 1987; Nuttbrock & Freudiger, 1991) or not measured interactive commitment at all (e.g. Hoelter, 1983) as it is considered to be less important than affective commitment (Stryker & Serpe, 1994).

For the Marston Vale study a single measure of interactive commitment was used. Respondents were asked to think about how their friends may fall into the various categories of agricultural producer, agri-businessman, diversified farmer, and conservationist farmer and then asked, “How many people are you friends with (‘friend’ was explained as ‘Someone with whom you would have regular contact and whose opinions you respect’) whose approach to farming falls broadly within the following categories.” This was followed by a list of the 4 categories of farmer and a 7 point scale from 0 to 6+. Because of the strong possibility that farmers may be perceived to fall into more than one group, respondents were asked not to put the same person down twice but to place them into a ‘best-fit’ category. To calculate the final commitment measure, the affective and interactive commitment measures were first standardised to a ten point scale, and then summed. The resultant scale comprises one measure of interactive commitment to two measures of affective commitment - reflecting the weaker influence of interactive commitment.

4. Measuring identity salience

There is no standardised approach to estimating identity salience, only the requirement that the measure assess “the relative importance or centrality of a given identity (and thus role) for defining oneself” (Hoelter, 1983: P141). In the literature two main approaches to investigating identity salience are suggested. The first is an approach similar to Kuhn’s (1964) twenty statements test where respondents are requested to rank identities relative to each other. This can be done either by asking respondents, if they were to talk about themselves to strangers, which identity would they talk about first, which second, which third, and so on (e.g. Stryker & Serpe, 1982, 1994), or through

using a paired comparison scale where each identity is rated relative to another (e.g. Serpe, 1987). The second approach is to measure identity salience through the use of salience scales. For example, Callero's (1985) "blood-donor salience scale" asked respondents to rate on a nine point scale from 'strongly agree' to 'strongly disagree', 'I rarely even think about blood donation', 'Blood donation is an important part of who I am', and three additional statements of identity. A similar approach was adopted by both Hoelter (1983) and Shamir (1992), where identity was measured using three and seven bipolar scales respectively.

In the Marston Vale study the use of salience scales was preferred to identity ranking. The identity salience index followed Hoelter's (1983) method and was constructed by combining a measure of identity ascription "How well do the following identities describe yourself?" and identity importance "How important are the following identities to your feelings about yourself?" The additional measure used by Hoelter of how 'central' the identity is was dropped in anticipation that farmers would not clearly comprehend the difference between the items. In the event, farmers had difficulties distinguishing between even the ascriptive and importance measures, many initially commenting that it was the 'same question'. This was resolved through providing an explanation of the differences. Rather than simply summing the results of the scales to provide a single measure of the four 'agricultural producer', 'agribusiness farmer', 'conservationist', and 'diversified farmer' identities, a measure of 'relative salience' was calculated for each identity (e.g. Shamir, 1992). Through this procedure, the influence of alternative identities can be accounted for in the measure of identity salience. For example, if a farmer indicates the conservationist identity is 'very important' and all other identities are ranked as 'very unimportant' the salience of the identity will be higher than that of a farmer who holds both the conservationist and diversifier identities as 'very important'. Thus for each role the score for each identity was divided by the total score of the other three identity scales.

5. Scales

Scales used for the measures in this section were linear and dividend into ten sections by minor ticks with major ticks at either end and in the middle. Respondents were asked to

indicate their response by placing a tick in the appropriate position along the line. The example Figure X shows the scale as used for the items of the role-behaviour index.

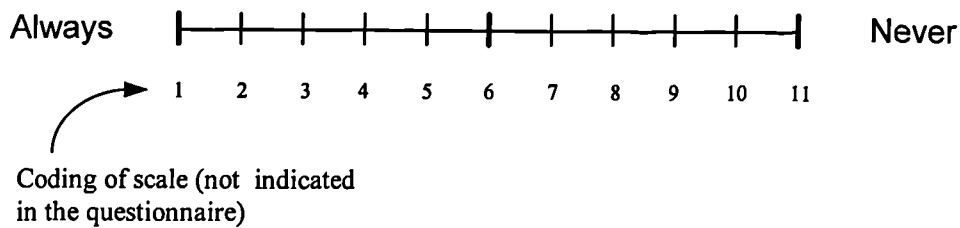


Figure 5.1: The 11 point scale used for items of the role-behaviour, *commitment and salience* indices.

Coding the scale involved recording the closest tick mark to the response, numbered as shown in Figure 5.1. In a review of scaling procedures, Cox (1980) recommended seven points as the optimal number for a scale. However, in this case, the eleven point scale was preferred as it has the advantage of reducing the number of tied ranks when correlating data or performing ANOVAs, and may thus increase the significance of the results.

Section six

Finally, a demographic section was included to provide information about the stage the farmer is in the life-cycle, their level of education and their net income. Life cycle is likely to be important for farmer identity as previous research suggests there is a strong relationship between age and approach to farming. For example, researchers have suggested that conservative/traditional/agricultural producer farmers are likely to be older and less educated (Shucksmith, 1993; Battershill & Gilg, 1996) and accumulator (agribusiness) farmers younger (Shucksmith, 1993) than other farmers. Likewise there is perceived to be a relationship between income and approach to farming with smaller farmers being forced to diversify or becoming marginalised, while larger farmers may continue to rely on agriculture. Another potential factor measured in this section is the existence of an heir for the farm. Allison (1996) suggests that the farmers who wish to pass on a viable farm to their heirs are unlikely to adopt major woodland planting schemes and similarly, Ilbery & Bowler (1993) note that farmers with heirs are more

likely to undertake diversification schemes that may encourage children to remain on the farm. A question was also included pertaining to training in forestry, as Gasson & Hill (1990) suggest that farmers with training in forestry are significantly more likely to participate in tree-planting schemes than farmers without. The demographic section was similar to that used by Wilson (1996) in his study of the Cambrian Mountains Environmentally Sensitive Areas scheme in Wales.

5.3.2.2 Administration of the questionnaire

Rather than obtaining a representative sample of the Marston Vale farmer population, a total coverage or 'census' technique was employed. This approach is being increasingly used in agricultural research, particularly when investigating populations that are known to be of a manageable size and strictly bounded - for example, in the regions zoned ESAs (e.g. Wilson, 1996). Census surveys have an advantage over random sampling techniques in that the representativeness of the results is assured, an important attribute in quantitative research. For the Marston Vale study, where a social approach to investigating agricultural decision-making is being suggested, it has the added advantage that all members of the affected farming community are interviewed. Randomly selecting farmers from the Marston Vale may have resulted in farmers who are important figures in the community being excluded from the investigative process.

The first stage in administering the questionnaire involved finding contact addresses for farmers within the Vale. To begin, a number of farmers were located and contacted using a combination of the Ordnance Survey 1:25000 series maps to identify farms that fell within the forest boundary and British Telecom's 'Yellow Pages' business directory. The 'Yellow Pages' directory was consulted for farmer listings under a variety of farmer-related headings including 'farmers', 'pig farmers', 'pig breeders', 'dairy farmers', 'poultry farmers', 'market gardeners', 'pick your own fruit and vegetables' and 'agricultural contractors' (recommended by Errington, 1985). This process yielded 43 of the estimated 96 farmers in the Marston Vale Community Forest zone (MVCF, 1992), a number of whom had retired. Farmers were approached through an introductory letter explaining the purpose and nature of the study and then telephoned two days after receiving the letter for the purpose of arranging an interview. Those who failed to

respond to the initial telephone call were repeatedly phoned until either a contact was made or a refusal was registered.

Contact with the remaining farmers was achieved through a process of 'snowballing', a technique where one is put in contact with friends and acquaintances of initial contacts to construct a survey sample (Burgess, 1996). Following their interview, farmers were asked to mark their farm boundaries on the map and state who their neighbouring farmers were (or any other farmers in the Vale they would be prepared to locate). Addresses and telephone numbers were then found through the telephone directory and contacts made through the same procedures as used for the initial farmer contacts. Through the procedure of outlining farm boundaries and naming neighbouring farmers, it was established that there were seventy three farmers in the Marston Vale (including growers and egg producers). Of these, sixty structured interviews were completed, with eleven farmers refusing to be interviewed and two unable to be contacted. The estimated number of farmers in the Vale differed from the Community Forest estimate of 96 (MVCF, 1992) because, although the Community Forest survey results refer to 'farmers', their sample includes an unspecified number of non-farmers such as land-owning companies and horse paddock owners.

The final response rate of 82 per cent, while sufficient for the purposes of the study, was lower than obtained by other researchers using similar techniques. For example, Wilson's (1996) census survey of farmers in the Cambrian Mountains ESA achieved a 99 per cent response rate. The lower response rate in the case of the Marston Vale is attributed to two main factors. First, because of the densely populated nature of the region a number of farmers had recently been involved in questionnaire surveys. Two farmers refused on the basis they had recently participated in farm surveys for students (one student had revealed details about hedge removal to the local newspaper). Secondly, whereas the ESA scheme is providing farmers with additional income to essentially continue with the status quo (Colman, 1994; Whitby *et al.*, 1996; Evans & Morris, 1997), there is no immediate financial reward in Community Forestry and many consider it to be a threat to their lifestyle. The majority of farmers who refused to participate in the survey stated they were simply not interested in talking about the Community Forest. While it would be preferable from the point of conducting the

statistical analysis to have interviewed more than 60 farmers the census approach does not allow for replacement as is the case with random sampling as the number of possible respondents is limited. Even so, a study size of 60 is not without precedent in agricultural research, for example, Ward and Munton's (1992) study involved a sample size of 63.

5.3.2.3 Analysis of the questionnaire survey

Analysis of the results from the quantitative survey mainly revolved around resolving two issues. First, while it is strongly suggested in the literature that identity groups exist (e.g. Higgins & Seabrook, 1986; Seabrook & Higgins, 1988; Shucksmith, 1993; Van der Ploeg, 1993) there is little existing empirical evidence. Thus the first question to address is whether, using the results of the role-behaviour, commitment and identity salience indices, it can be established that there are distinct identity sub-cultures within the Vale, i.e. Can farmers be meaningfully clustered on the basis of their preferred role-behaviours?

To explore this issue three stages of analysis were applied:

- 1) A principal components analysis (PCA) was conducted on the role-behaviour index in order to investigate the nature of behavioural strategies in the Vale.
- 2) A cluster analysis was conducted to provide a classification of farmers into the four hypothesised identity groups.
- 3) The results from the cluster analysis were compared with (a) the factor scores from the PCA, (b) independent behavioural variables such as conservation or diversification activities on the farm, (c) the results from the commitment measure, and (d) the results from the identity-salience measure.

1. Principal components analysis

In the role-behaviour index, farmers' preferred frequency of role performance was measured using a 20 item index, with items selected to represent the four hypothesised farming role-identities. If identities were defined solely by performance of positive roles, then locating farmer strategies would simply be a case of adding up the five items

for each identity to produce farming 'role-strategies' for comparison with the farmer groups. However, one of the hypotheses of identity theory is that identity is defined in part by counter-identity and role by counter-role (i.e. roles incompatible with the identity type), thus farming strategies may be defined in part by negative loadings on role-behaviour items. For example, a traditional strategy may involve behaviours with significant positive loadings on traditional roles 'respect traditional farming values' and 'regard farming as a life-style' and significant negative loadings on diversifier roles such as 'learn new non-agricultural business skills'. By using PCA to investigate the underlying structure of the role-behaviour index, it is possible to identify significant trends in the data, thus enabling 'role-strategies' of associated roles and counter-roles to be identified. For a discussion on the basics of principal components analysis, see Ilbery (1981), Kent & Coker (1992), or Hammond (1995).

In a standard PCA (e.g. that used by Ilbery, 1981, 1983) the derived factors (axes) are orthogonal. Whilst this is desirable from a mathematical perspective, it does not always provide the most illuminating evaluation of the variables, which may be better investigated by modifying the position of the original frame of reference (Child, 1970). Child suggests that, while the simplest approach is to rotate the axes 90° to give an *orthogonal rotation*, the most widely used approach (in psychology) is to rotate the axes through different angles to achieve an *oblique rotation*. This procedure allows the axes to be correlated, thus accounting for the fact that as "most, if not all, human characteristics are correlated to some extent ... the underlying major factors must be similarly correlated" (Child, 1970: P60 - also see Hammond, 1995). Thus, the PCA axes were obliquely rotated using the OBLIMIN method to obtain the final components describing the data set. Jackson's (1993) methodology following the same factor-analysis and cluster combination also used rotation. (N.B. Rotation using the VARIMAX solution - as used by Jackson - produces a similar result except that Factor 7 becomes Factor 5). The analysis identified seven components with eigenvalues greater than one - the standard acceptable significance level for components (Child, 1970; Ludwig and Reynolds, 1988; Kent & Coker, 1992) - accounting for a total of 67% of the variance. Critical values for the significant loadings were calculated using the Burt-Banks formula (see Child, 1970) to take account of the sample size and the factor number. As PCA requires that the data be normally distributed (Austin *et al.*, 1996), the

distribution of the responses for the individual items was investigated and one highly skewed item 'Farm in a manner that will leave the farm more productive than when you started farming it' removed from the analysis.

2. *Cluster analysis*

Cluster analysis is a general term that covers a wide range of multi-variate techniques directed at sorting objects into groups based on their resemblance to one another, or, as defined by Bijm (1973: P2), "in cluster analysis one attempts to construct groups of objects or variables in such a way that the objects in a cluster have 'great' similarity between each other but little similarity with other variables outside that cluster." Cluster analysis enables the researcher to detect the existence of possible communities - whether communities of land-use types in historical geography (e.g. Power & Campbell, 1992), farmer communities in agricultural geography (e.g. Ilbery, 1981, 1983; Shucksmith *et al.*, 1993; Potter & Lobley, 1996), business communities within the economy (Ketchen & Shook, 1996), or, in the field of ecology where it is widely used (Schaffer & Green, 1996), communities of flora and fauna. While the clustering process is most commonly applied inductively to provide an exploratory classification of observations, it may also be applied deductively where "the number and suitability of clustering variables, as well as the expected number and nature of groups are strongly tied to theory" (Ketchen & Shook, 1996: P443). With the Marston Vale study therefore, the cluster analysis technique should be able to classify farmers (based on preferred role-behaviours) into the theoretical 'identity groups'.

Ketchen & Shook (1996) suggest that there are three critical issues involved in the application of cluster analysis: (1) selecting the variables to use in the cluster analysis, (2) accounting for possible multicollinearity amongst the variables, and (3) deciding on whether to standardise the variables. An additional three procedures that are required for cluster analysis are (4) selecting a clustering algorithm, (5) determining the final number of clusters, and (6) checking the external validity of the clusters.

Selection of variables : The problem of selecting variables occurs principally where an inductive approach is used for the classification. For deductive studies where the

variables are determined through theory the issue of which variables to involve and which to exclude does not arise to the same extent. In the case of the Marston Vale survey variables had been pre-selected through the preliminary survey to represent four predicted identity groups.

Accounting for multicollinearity : High correlations between input variables can create a problem in cluster analysis as it may overweight one or more of the underlying constructs. To counter this, researchers can conduct a principal components analysis with orthogonal rotation on the variables and use the resulting uncorrelated factor scores as input variables for the clustering procedure. However, Ketchen & Shook (1996) note that this approach is controversial as it involves dropping factors with low eigenvalues which may contain important information for the cluster analysis. For example, Ilbery (1981) uses only the eight extracted components with eigenvalues greater than 1 - accounting for only 71.5% of the total variance within the data set. In the Marston Vale study, clustering farmers into identity groups in a deductive fashion resolves the issue of multicollinearity by ensuring that all theoretical underlying constructs (identities) are more-or-less equally weighted (five variables representing each identity). Thus to avoid potential loss of relevant information, adjustment for multicollinearity was not conducted.

Standardising : Because cluster analysis maximises the distance between groups along all clustering variables, variables with large ranges are given more weight than those with small ranges. Standardising the data has the advantage of transforming the distribution so that no one variable has an undue effect on the resultant cluster, but the disadvantage that, in doing so, meaningful differences between the cases may be lost (Power & Campbell, 1992; Ketchen & Shook, 1996). In general, the procedure is recommended (e.g. Milligan & Cooper, 1988) and is a common practice “even when the columns are expressed in similar units, such as ratings on a 7-point, equal interval scale” (Schaffer & Green, 1996, P149). Variables were standardised to a range of between 0 and 1 for the Marston Vale study because the algorithm used to produce the clusters (Ward’s method) is sensitive to outliers (Bijnin, 1973).

Selecting a clustering algorithm: There are a number of possible clustering algorithms available (e.g. single linkage, centroid method, complete linkage, and Ward's method). These differ in the mathematical procedures used to calculate the distance between clusters. While it is widely accepted that there is no method best for all situations and no unique solution or single classification for a set of data (Binjin, 1973; Kent & Coker, 1992; Power & Campbell, 1992), certain techniques have properties which render them suitable for specific instances. For the Marston Vale study Ward's method was selected because it is appropriate for use where clusters are not very dissimilar (The identity groups were expected to be similar as all simply represent sub-cultures of an overall farming culture). In addition, Ward's method is suited for studies where the number of observations in each cluster are expected to be approximately equal (Ketchen & Shook, 1996), and results from the survey suggested there was a reasonable representation of all four types of farmer. An exploratory investigation of alternative algorithms conducted on the recommendation of numerous authors including Ludwig & Reynolds (1988), Kent & Coker (1992) and Ketchen & Shook (1996) showed that Ward's method produced the most distinct clustering pattern.

Determining the number of clusters : As with selection of variables, the issue of determining the appropriate number of clusters is far more contentious in inductive studies than for deductive approaches (see Ketchen & Shook, 1996 for a practical discussion). In the Marston Vale study, application of Ward's method produced four distinct clusters which, when tested for external validity, proved to have the expected characteristics of the four identity groups.

Checking the external validity : Cluster analysis will partition *any* data set. Where there is no group structure, the analysis will nevertheless classify data on a purely arbitrary basis (Krzanowski, 1988; Kent & Coker, 1992; Ketchen & Shook, 1996). Thus it is essential that the validity of the groups is investigated. While there are a number of approaches to validating the cluster solution (see Aldenderfer & Blashfield, 1984), both Ketchen & Shook (1996) and Schaffer & Green (1996) strongly advocate establishing external validity through conducting analysis of variance tests on external variables that are theoretically related to the clusters. Although no comprehensive description of the four theorised identity groups is available, a number of researchers have observed

similar behavioural groups and noted characteristics that may typify these ‘types’ of farmer (e.g. Marsden *et al.*, 1986; Ilbery, 1988, 1991; Shucksmith, 1993; Battershill & Gilg, 1996; Wilson, 1996). Statistically significant between group differences were detected through the use of the Kruskal-Wallis H, Chi-square, and Fisher’s exact tests, enabling the external validity of the clusters to be confirmed and the groups identified as representing ‘agribusiness’, ‘diversifier’, ‘conservationist’, and ‘agricultural producer’ farmer types. For descriptions of the statistical tests used see Coolican (1994) or Sokal & Rohlf (1995).

3. *Between-groups comparisons of the identity groups*

This part of the analysis was intended to answer a second question, *viz.* Is there a connection between these role-behaviour defined groups and expressed commitment to and salience of the farming identities - i.e. if it is recognised that there *are* groups of farmers with similar preferences for role-performance in the Vale, do farmers recognise themselves as belonging to these groups under the hypothesised ‘identities’ or ‘farmer types’? Symbolic interactionism suggests that farmers who share similar role-behaviours should also share similar social structures of meaning such as language, interpretative procedures, attitudes, roles and social class perspectives, and that as these become internalised (Coughenour, 1976; Weigert *et al.*, 1986) the individual begins to view them as part of his/her own, and adopts the ‘self-referent label’ of the group, e.g. “I am a” Therefore, if farmers are asked which identities they hold most salient, there should be a relationship between the salience of the identities and (a) the groups clustered by role-behaviour, and (b) the behavioural indicators of group belonging. For example, is a farmer who falls into the “agricultural producer” group (as defined by the role-behaviour analysis) likely to rate his ‘agricultural producer’ identity as more salient than a farmer who falls into the conservationist group? Is he/she likely to be more committed to the identity? For this analysis, the identity salience and commitment indices were used and the group differences assessed using the Kruskal-Wallis H test (see Chapter 7 for tables). A positive result for this analysis would suggest that the groups identified by cluster analysis - i.e. that share similar beliefs about role performance - are likely to label themselves as belonging to that group.

5.4 Investigating the importance of maintaining current farming roles - the qualitative investigation

From the theoretical framework proposed in Chapter 4 (see Figure 4.2), a series of questions arise related to the link between role-behaviour and commitment to/ salience of the identity. In particular: 'What are the significant symbols of the farming identity?', 'How do other members of the farming community assess the performance of the farming role?', and, 'What aspects of farming role-performance supply the farmer with self-esteem or satisfaction with farming?' In addition, and in line with the overall objectives of the study, there needs to be greater focus on the role of woodland or forestry as symbol of farming ability. While it undoubtedly has a symbolic value, little is known about its link with identity sub-culture. For example, Gasson & Hill (1990) suggest that woodland today is largely seen as a luxury available only to successful farmers while others simply regard it as a waste of good agricultural land (e.g. Williams *et al.*, 1994) - thus it may be expected to symbolise anything from success in farming to a lack of commitment to farming.

While the dichotomy between qualitative and quantitative methodologies is strengthening in some areas of geography as epistemologies appear to be attaching themselves to specific methodological approaches (e.g. humanism and post-modernism with qualitative methods - Philip, 1998), there are an increasing number of calls for this entrenchment to be reversed in favour of a more flexible combined approach that utilises the advantages of both methods (e.g. Bryman, 1988; Philip, 1998). The quantitative approach used to detect identity structures in the Marston Vale farming community is too restrictive to investigate the non-structural aspects of farmer self-identity (e.g. significant symbols, status, and self-esteem/satisfaction), particularly since there is no pre-determined theory on which to base an investigation. Thus, for this section a different approach is required. Qualitative methods and identity theory share common origins in the school of symbolic interactionism. However, the unstructured qualitative techniques are far more adept than a quantitative approach (such as Stryker's) at examining both processual elements and the meaning of events and objects to both individuals and society (Mason, 1994). For this reason, a qualitative methodology was used to investigate the meaning of farmer identity within the Marston Vale Community Forest.

5.4.1 A qualitative methodology

The investigation of how and why farmers display cultural resistance to the Community Forest scheme involved a series of individual interviews with the farmers in two stages: (a) interviews conducted in tandem with the application of the quantitative survey, and (b) a series of more intensive follow-up interviews with a limited number of farmers. This approach of a farm survey followed by a more limited number of intensive interviews was also used by Salamon (1985) for investigating a community structured around German ethnic identity in the USA⁴ and Duram (1997) in a study of conventional and alternative farming in Colorado.

5.4.1.1 *A combined qualitative/quantitative approach for the development of theory*

In order to construct a picture of how self-identity relates to farmer behaviour (specifically with reference to the establishment of woodland, diversification and leisure provision for the public), an approach borrowing the principles of ‘grounded theory’ was adopted in the gathering of qualitative data during the application of the main farm survey. Grounded theory is “theory grounded in the perspectives of those who have participated in the research process” (Philip, 1998: P267 - also see Bryman, 1988; Bryman & Burgess, 1994). The first part of the qualitative investigation was combined with the quantitative survey so that a broad range of perspectives were encompassed. Three open questions relating to the Community Forest scheme were presented to all farmers in the survey, namely “What is your overall impression of the Community Forest scheme?”, “Do you think the provision of leisure facilities for the public is something farmers would ever seriously consider?”, and “Do you see farm-forestry as a venture farmers would ever seriously consider?” These questions were worded broadly in order to encourage farmers into a discussion and were included as a separate section at the end of the questionnaire.

The interviews themselves were conducted in a semi-structured manner with farmers encouraged to talk about any issue that they considered important and that pertained to

⁴ Salamon’s study involved 72 farmers in the initial survey and a sample of ten households for the intensive study.

farming. Interviews were regarded as an opportunity for the researcher to learn about the farming community and farming in Marston Vale, thus inquiries were made over a broad range of topics. Not all of the conversation was written down, but important quotes were transcribed verbatim by the researcher. Through this process information was gathered on such areas as the politics and history of the Vale, relations with other farmers, approaches to farming, and assessments of alternative types of farmer (counter-identities). Introducing a qualitative aspect to the survey led to a wide variation in interview lengths, ranging from *twenty minutes - the minimum time required to complete the quantitative questionnaire* - to three hours, with the average interview lasting approximately one hour.

For analysis, qualitative responses from the initial farm survey were first transcribed from the questionnaire sheets to files under the name of the farmer, and then, within these files, classified into topic areas. Once all the data from the first questionnaire had been collected, quotes and possible interpretations (labelled with the name of the farmer for identification) were assembled into newly created topic area folders, e.g. 'access', 'planning', 'set-aside', 'farmer' sub-folder 'identity', 'farmer' sub-folder 'status', etc. The final result was a catalogued collection of farmer responses along with a preliminary interpretation of how they may fit into the overall perspective of the 'farming identity'. The emergent theories from the preliminary analysis of these data were used to determine the schedule of topics to be covered in the main qualitative survey. The approach was successful in that it enabled the identification of important areas to be examined in the main qualitative study as well as the selection of farmers to be interviewed.

5.4.1.2 The main qualitative study

The qualitative investigation was conducted a month after the completion of the main survey. Thirteen farmers from the initial Marston Vale survey were selected to represent the four identity groupings as determined by the cluster analysis (Figure 7.1) - one 'agribusiness' farmer (a self-confessed 'prairie farmer'), five 'diversified' farmers, four 'conservationist' farmers, and three 'agricultural producer' farmers. Selection was subjective and involved the researcher identifying farmers with a range of farm

management practices, views on the Community Forest scheme, and demographic characteristics. One of the farmers interviewed was selected on the basis that he had put his entire farm into 5 year set-aside and therefore had ceased to perform many of the 'farmer roles'. The selection also included two of the farmers from non-farming backgrounds under the hypothesis that this may affect their appreciation of farming roles. Two farms were jointly managed (one by a husband and wife team and another by two brothers) and, for these farms, interviews were conducted with both members of the decision-making team present. A brief summary of the characteristics of the farmers is presented in Appendix v.

The interview began by asking farmers to recount the history of their family in farming, and in particular how they came to be on the farm. Questions were then directed towards four main areas: (a) defining the boundaries of the farmer identity, i.e. 'at which point does a progressively diversifying farmer cease to be viewed as a 'farmer' by the farming community?' and 'when is a newcomer to farming considered by the local community to be a proper farmer?', (b) investigating how farmers recognise a 'good farmer', i.e. 'what role-behaviours symbolise to the farming community that the farmer is a member of the farming community?', (c) having established that crop presentation and yield are important symbols of farming ability, establishing how woodland may be viewed as a crop (the important factor here was whether woodland could replace crops as a significant symbol or whether the two forms of land-use were incompatible), and (d) investigating the process of 'roadside farming' or 'hedgerow farming' as a means of both communicating ideas and establishing credentials within the farming community. In addition, information was gathered about the individual's reasons for becoming a farmer and their personal farming philosophy in order to relate their approach to their self-identity as a conservationist, agribusinessman, agricultural producer or diversifier farmer.

For conducting the interview a loose schedule of topics and questions was compiled. Besides the initial introductory questions about family history on the farm, the interview was not conducted in a set order. Rather, farmers were allowed to guide the discussion and the schedule was only used to ensure the major areas of investigation had been covered. In practice this often involved asking questions directly from the schedule;

however, unlike a structured survey farmers were permitted to extend the discussion into any area that interested them. Interviews lasted from between forty-five minutes to two and a half hours, with an average interview length of approximately one and a quarter hours. All interviews were tape recorded to enable the conversation to flow without interruption. They were later transcribed in full (as recommended by Mason, 1994) with some indicators of context included - in particular, thoughtful pauses in the conversation, interruptions, laughter, anger or sarcasm, rapid responses to questions and emphasised words or sentences - all of which may indicate the importance or validity of the response.

Analysis of the qualitative survey involved first reading through the transcripts until a degree of familiarity was obtained and then, second, going through the data and compiling summaries of the ideas/issues raised. For example, the following quote is a typical section from the summary document for farmer 11:

[Farmer 11: Issue 3] Talks of farmers who go into farming because their father wishes them to rather than because they enjoy it. "It's a bit like being told, you know, 'you've got to marry this girl' and he hates her. I mean it could be that you marry her but you probably wouldn't stay with her very long .. [Laughs]" It's interesting here that he equates the choosing of the farming occupation to the institution of marriage, perhaps the similarity is the degree of commitment required or perhaps the relationship between a farmer and his farm is as important to him as a marriage [N.B. Farmer 11 is happily married and the family are very close]. This could add weight to the idea that the farm has an identity of it's own - in this case compared with the identity of a wife.

Once all transcripts had been summarised in this fashion, files were created based loosely on the topic areas that had emerged and the labelled issues placed together in these files. The example given above was included in the "The 'farm' as an independent identity" file. Relevant ideas and quotes that emerged from the initial farm survey were also placed in these files. Analysis then involved reading these collections of ideas and searching for those that appeared relatively consistent between the farmers, or that appeared to introduce new issues to the topic - thus providing possible links with other emerging ideas. These 'consistent' ideas were then used to suggest important facets of the farming identity in the Marston Vale. The investigation was directed at both a cultural and sub-cultural level as one of the concerns of the study was to differentiate

between the responses of the different sub-cultures. To provide a check on the reliability and validity of the results, the qualitative data and the quantitative data were triangulated where possible throughout the analysis, as suggested by Coolican (1994) and Bryman & Burgess (1994).

5.4.1.3 *Why not investigate the roles and identities of all farm family members?*

Emergence of the family household (including farmer/sons/daughters/spouse) as a common focus of analysis (Redclift & Whatmore, 1990) and the increasing focus on the farmwife's role in the farm has thrown some doubt on the long-standing assumption in economic analysis that the adult male-farmer is solely responsible for decision-making on the farm. An identity approach concentrating on only one of the family members may thus be criticised for taking the decision-making process out of context and downplaying the role of significant others in the family. However, the conceptual framework for identity studies (symbolic interactionism) suggests that normative influences are already internalised as the individual *is* a reflection of the social *mêlée*.

In addition, research conducted into the role of women in the farm family suggests that, although some farmwives work jointly with their husbands (Gasson, 1980), their role is still predominantly one of the house-keeper, secretary, accountant, childrearer, and permanent reserve labour force (Darques, 1988; Hastings, 1987-88; Little, 1991), whereas men tend to dominate the general decision-making on the farm (Bokemeier & Garkovitch, 1987). Even where the farmwives are pluriactive their role on the farm remains basically unchanged (Gasson & Winter, 1992). For these reasons it was considered that investigating the identity of the principal decision-maker with regard to allocation of capital, as with Marsden et al's (1989) definition of 'farmer' and that used by Wilson (1996), would provide a sufficient measure the future development of the Community Forest.

5.5 Summary and conclusion

This chapter has built up a methodology which combines the use of a quantitative approach to investigate the possible existence of role-defined identity groups within the Marston Vale farming community and a qualitative approach for investigating the

meaning of being a farmer to individual farmers. In the first instance, the process of cluster analysis is used to establish the existence of groups with similar farming identities within the Marston Vale. The relationship between these groups and behavioural characteristics suggested in the literature as fitting a particular type of farmer is used to validate that the clusters have meaning. In addition, an analysis is also proposed to investigate whether farmers' own self-identity - as measured through an identity salience and commitment indices - coincide with the definitions given to the clusters. The second part of the investigation involved thirteen in-depth qualitative studies of individual farmers selected as representative of the sub-cultures. Emphasis was placed on the important questions of the symbolic significance of farm woodland and the relationship between farmer self-identity and diversification.

In the process of conducting the main farm survey a considerable amount of data concerning farmer and farm characteristics were gathered. This, when collated, provides an important contextual perspective for the later analysis of farmer self-identity. Consequently, this largely descriptive analysis of farming in the Marston Vale is presented in the following chapter.

Chapter 6 : Farming in the Marston Vale - a descriptive account

6.1 Introduction

In order to place farmer behaviour in context within the Community Forest, it is important to review current farming practices in the Marston Vale. The following chapter therefore provides an outline of the farming community under investigation, with much of the information of relevance to both the identity analysis and the qualitative investigation of farmer identity and identity processes. The chapter is divided into five sections; (6.2) farm structural features such as farm size, goods produced, and income; (6.3) farm woodland features such as the amount of woodland on the farm, history of woodland planting and management, and plans for future planting; (6.4) changes in farm structure and management with respect to diversification, intensification and conservation activities; (6.5) constraints to land use such as debt, planning, tenancy; and (6.6) farmer characteristics such as age, education and succession plans.

6.2 Farm structure

6.2.1 **Farm size**

Figure 6.1 shows the distribution of farms by total area. While this provides an indication of the overall distribution of farm sizes, a more illuminating picture can be obtained by dividing farms into three sizes (<100, 100-250, >250 hectares) and comparing the tenancy arrangements of the various groups (as is presented in Table 6.1). This analysis reveals a large group of 'owner occupied' farms of between 100 and 250 hectares where only 18% of the land is rented, a group of smaller farmers with a higher proportion of rented land (36%) that may be described as 'small mixed-tenure', and, in contrast to these groups, ten farmers with farms larger than 250 ha renting an average of 70% of their arable land. This last group can be termed 'large corporate tenants' as

much of this land is rented off the major corporate landowners in the Vale. Note that many of these farmers also own considerable areas of farmland.

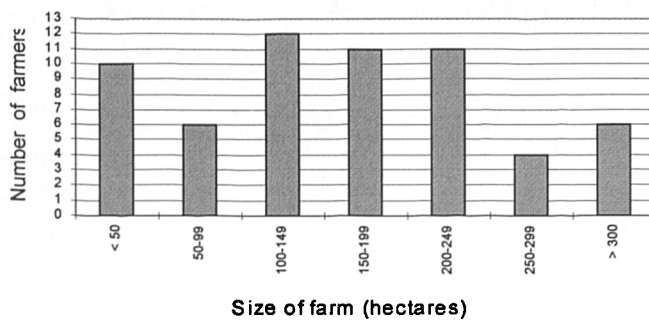


Figure 6.1: Farm size distribution in the Marston Vale.

farm size	Number of farmers	% of farmers renting land	% of land rented	Description
< 100	16	56%	36%	Small mixed tenure
100 - 250	34	35%	18%	Owner occupiers
250 +	10	100%	70%	Large corporate tenants

Table 6.1 : Land tenure arrangements by farm size.

Farm boundaries in the Marston Vale appear to be in a state of flux. Forty per cent of farms have altered their boundaries over the past 10 years with ‘owner occupiers’ losing the least area of farmland (1%) and the ‘large corporate tenants’ gaining the most (10%) (see Table 6.2). Loss of land is largely associated with road developments, either directly for the road, or through new roads (in particular the Marston Moreteyne and Bedford southern bypasses) creating development areas on truncated agricultural land. Most of the land lost from the ‘large corporate tenants’ has resulted from landowners developing land inside the southern bypass or withdrawing land for mineral extraction. This group clearly is coming under increasing pressure to maintain farm size through land purchases as a high proportion of their land is rented and the priorities of the landowners do not appear to be predominantly agricultural. In general, Marston Vale concurs with the national trend of gradually increasing farm sizes (e.g. Marsden *et al.*,

1986) - although the steady erosion of rented land in the Vale to both development and mineral extraction is tending to balance the increases to some extent.

farm size	% of farmers increasing	Amount increased	% of farmers decreasing	Amount decreased
Small mixed tenure	18.5%	3 %	18.5%	1.5 %
Owner occupiers	32.5%	5.5 %	11%	1.0 %
Large corporate tenants	20%	10.5 %	20%	4.0 %

Table 6.2: Per cent changes in farm size by total farm size.

6.2.2 Agricultural produce

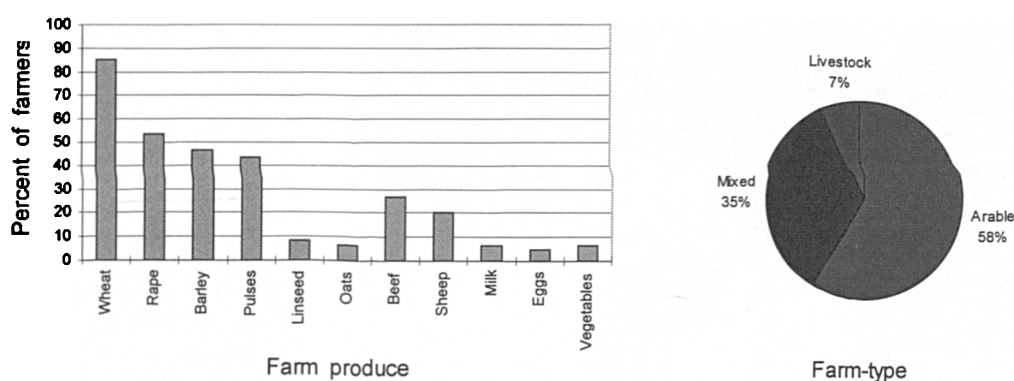


Figure 6.2: (a) Farm produce and (b) farm type in the Marston Vale.

Farming in the Marston Vale has been dominated by arable production for at least 200 years (see Lysons & Lysons, 1806) and, from Figure 6.2(a) and (b), it appears this domination is still present. Historically, crops such as wheat, barley, oats and pulses have been grown in large quantities in the area (Fitchett, 1943), with the only recent addition that of oilseed rape. Evidence of a strong relationship between the total number of crop species grown and farm size (Spearman's $r = .5387$, $N = 60$, $P < .001$) suggests that the larger farmers are able to spread the risk of poor returns over a greater variety of crops. While arable production dominates, livestock is nevertheless present on 42% of farms - although a relatively small proportion of farmers (7%) are involved exclusively in livestock production (see Figure 6.2b). As farmers were interviewed a month prior to

the 1996 BSE crisis, beef production in the Vale may have decreased substantially since the survey was conducted - particularly as two of the exclusive beef producers were only marginally viable at the time of the survey.

6.2.3 Farm income



Figure 6.3: Annual net farm income.

Figure 6.3 shows the annual net incomes of the surveyed farmers. Net farm income is strongly correlated with both total farm size (Spearman's $r = .5666$, $N = 60$, $P < .001$) and farm area owned (Spearman's $r = .3288$, $N = 60$, $P = .010$), reflecting a reliance on agricultural production for income rather than diversification projects (N.B. It should be noted that the last category $>£70,000$ is a conservative estimate as the scale provides no upper limit). Measures were calculated for 'income from diversification' (taken as the total per centage of income from diversification multiplied by the midpoint of the income category) and 'income from agriculture' (total income midpoint minus income from diversification). The results of this analysis showed an uneven distribution of income as the top 12% of farmers account for 21% of total income from agriculture and 35% of total income from diversification. In contrast, the bottom 21% of farmers account for only 10% of total income from agriculture and 2.5% of income from diversification. It is interesting that farmers in the bottom income category ($<£20,000$) are the least diversified of all income groups, with only 38.5% having diversification projects on the farm, whereas, for example, 71% of farmers in the top income group have diversified. From this it may be observed that failure to diversify can lead to farmers becoming economically marginalised.

6.2.4 Family history on farm

The farming community in Marston Vale has a well-established agricultural past. Figure 6.4 (a) shows that 90 per cent of the farmers in the survey had been brought up on a farm, with the remainder either from an urban background with no rural influences (3%) or a rural background but without farming parents (7%). In terms of family arrival, the majority of families appear to have become established during the period of the 1940s to 1960s - at a time where the drive to maximise agricultural production was at its greatest. The lack of establishment in the last three decades (only seven farm families have become established) suggests the forces of land settlement in the Vale have changed dramatically over the past 30 years in a fashion that does not favour the establishment of new farmers.

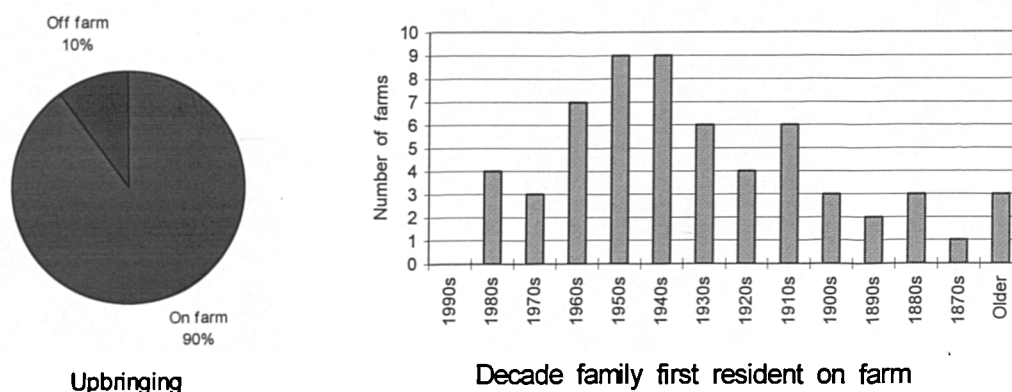


Figure 6.4: (a) farming background of farmers and (b) farming background of family.

6.2.5 Sources of management ideas

The average importance of various sources for providing advice and ideas on the management of the farm is presented in the Table 6.3 - as is the per centage of farmers who ranked the sources as either 'important' or 'very important'. Unquestionably the most important source for farmers appears to be the farming press (synonymous with the

‘Farmer’s Weekly’ for many), which provides many farmers with general farming advice, feature articles and forecasts of future trends in farming.

Sources of farm management ideas	Average score*	Per cent ‘Important’
1. Farming press	2.11	93%
2. ADAS	1.65	53%
3. NFU	1.62	53%
4. Financial consultants	1.45	38%
5. Agricultural shows	1.42	42%
6. Management consultants	1.33	23%
7. National newspapers	1.33	28%
8. CLA	1.25	23%
9. Bedfordshire County Council	1.20	17%
10. FWAG	1.18	18%
11. Community Forest team	1.13	12%

* From three point scale of 1 = unimportant, 2 = important, 3 = very important

Table 6.3: Sources of management ideas for farmers in the Marston Vale.

Commercial farm management advisors such as ADAS and the political advisors in terms of the NFU provide 53% of farmers with management advice. From a Community Forest perspective, the advice forwarded by the project team appears to be going largely unheeded - as was the case in Williams et al’s (1994) study of the Greenwood Community Forest . In fact, the concept that the Community Forest may provide them with ideas was commonly greeted with ridicule from the respondents, with three farmers suggesting they were likely to do the opposite of anything the Community Forest team suggested. There is a predictable relationship between the sources of information and the extent of the farm enterprise, with the larger farmers (who have both greater management requirements and ability to pay for advice) regarding both financial (Mann-Whitney U = 252, N = 60, P = .004) and farm management (ADAS) advisors (Mann-Whitney U = 271, N = 60, P = .019) as of greater importance.

6.3 Farm woodland

6.3.1 Area of woodland on the farm

The 225.5 hectares of wooded farmland covered in the farm survey were not evenly distributed, but were concentrated in a few large and generally well-established woodlands - with the vast majority of farms (80%) having little or no woodland (see Figure 6.5). Woodland distribution can be explained largely in terms of farm size as there is a strong positive correlation between the area of farm-woodland and the total size of the farm (Spearman's $r = .3689$, $N = 60$, $P = .004$). That no corresponding correlation exists between farm size and woodland expressed as a per centage of farm area (Spearman's $r = .0200$, $N = 60$, $P = .879$) suggests that the per centage of land that it is economically viable to remove from production is responsible for dictating how much woodland is on the farm, rather than larger farmers being more inclined towards creating or maintaining woodlands.

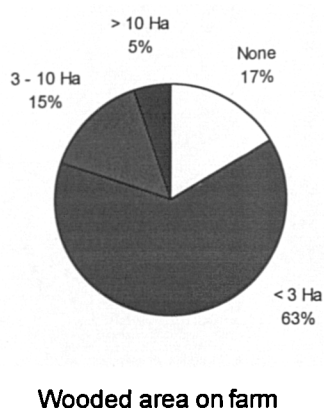


Figure 6.5: Area of woodland/spinneys on farm.

6.3.2 History of woodland planting

Almost half of farmers (45%) had a family history of woodland planting, i.e. establishing spinneys or areas of woodland, rather than simply planting individual hedgerow trees (see Table 6.4). The 'no-history of planting' and 'history of planting'

groups have significant differences in the length of family residency on the farm, with farmers with a history of planting having been in residence for a longer period (Mann-Whitney $U = 285$, $N = 60$, $P = .017$). Again woodland planting appears to be strongly related to the total farm size, with farmers that own larger farms likely to have planted woodland on the farm (Mann-Whitney $U = 199$, $N = 60$, $P < .001$).

Family history of woodland planting	Number of farmers
1. Some (individual trees)	20
2. Quite a few (individual trees)	5
3. Spinny (tree block < 2 ha)	15
4. Woodland block (> 2 ha)	7
None	13

Table 6.4: Family history of woodland planting.

When asked why the woodland/trees had been planted, respondents emphasised the amenity/visual enhancement advantages of woodland rather than any commercial gain (see Table 6.5). Only three farmers noted that the woodland had been planted for the extraction of timber or wood. In general, woodland planting is conducted for two main reasons (a) to make the farm look nicer (this may include replacement of lost elms, screening of development and compensations for hedge removal), and (b) to provide game cover. Evidence from the open questions suggests that farmers have not, in the past, been prepared to sacrifice good agricultural ground for woodland creation as much of the current planting has been directed at field boundaries, field corners or poorer areas of farmland. Neither has land been widely sacrificed in the name of 'nature conservation' as only one farmer specifically planted a spinney for conservation purposes - as a butterfly conservation area. Removal of trees/woodland because of the Dutch elm disease epidemic of the 1970s appears to have played almost as important a part of recent woodland tradition in the Vale as tree planting. Forty two per cent of farmers noted that they had removed elm trees (formerly a popular and common

hedgerow tree in the Vale) - with many suggesting the landscape had been devastated by the changes - see Appendix i).

Reason for planting spinneys or woodland	Number of farmers
1. Amenity planting (make farm look nicer)	11
2. Planting field corners/ difficult areas	8
3. Replace lost elm trees	8
4. Planting as game cover	7
5. Restore or compensate for lost woodland/hedges	7
6. Screening or shelter	4
7. Planting for timber/wood	3
8. Planting as wildlife habitat	1
No woodland/spinneys planted	13

Reason for removing trees or woodland in the past

1. Dutch Elm disease (trees)	25
2. Rationalise fields (trees)	4
3. Bring into agricultural production (woodland)	1
No trees removed	30

Table 6.5: Reasons for planting/removing trees.

6.3.3 History of woodland management

Family history of woodland management	Number of farmers
Shooting	4
Cricket bat willows	2
Firewood and local village use	1

Table 6.6: Family history of woodland management.

As a substantial proportion of the total woodland was concentrated on a limited number of farms, it is not surprising that very few farmers had a family history of woodland management (see Table 6.6). While the majority of these managed woodland for

shooting purposes, there is some evidence of commercial woodland management in the form of managing for cricket bat willows.

6.3.4 Future woodland planting

Area of woodland planned for the future	Number of farmers
1. No trees or woodland	28
2. Hedgerow trees or occasional trees	17
3. Spinneys and/or field corners (< 2 hectares)	10
4. Woodland (>2 hectares)	5

Table 6.7: Intended area of future woodland planting.

The Community Forest designation (and subsequent publicity blitz) in 1992 does not appear to have shifted farmers' perceptions of the value of woodland planting. While over 50% of farmers intend to plant trees/woodland in the future - 5 of these woodland blocks are greater than 2 hectares (see Table 6.7) - the reasons for planting still focus on the traditional amenity and landscape enhancement value of trees rather than the commercial, leisure or conservation orientation preferred by the local Community Forest (see Table 6.8). The fact that 8 farmers intend planting trees for screening or shelter bears witness to the amount of development going on in the Vale at the present time, with farmers screening both their own development projects (such as industrial unit conversions) and the developments of others (such as the new bypass schemes).

Reason for planned planting of spinneys or woodland in the future	Number of farmers
1. Amenity planting (make farm look nicer)	13
2. Screening or shelter	8
3. Planting field corners/difficult areas	3
4. Replace lost elm trees	3
5. Planting as game cover	2
6. Planting for timber/wood	2
7. Planting as wildlife habitat	2
8. Restore or compensate for lost woodland/hedges	1
9. Planning gain	1

Table 6.8: Reasons for planting woodland in the future.

6.3.5 Hedge planting and removal

	Farm size	Number of farmers	Mean hedge length (m)
(a) Hedge planting/removal in last 15 years			
Planted	< 100 Ha	4 (16)	713
	100 - 200 Ha	3 (23)	420
	200 - 300 Ha	5 (15)	826
	> 300 Ha	2 (6)	1905
	Total	14 (60)	986
Removed	< 100 Ha	0 (16)	0
	100 - 200 Ha	8 (23)	444
	200 - 300 Ha	5 (15)	458
	> 300 Ha	3 (6)	1370
	Total	16 (60)	622
(b) Intended hedge planting/removal in the next 5 years			
Plant	< 100 Ha	6 (16)	1144
	100 - 200 Ha	3 (25)	1466
	200 - 300 Ha	3 (15)	447
	> 300 Ha	2 (6)	2100
	Total	14 (60)	1190
Remove	< 100 Ha	1 (16)	45
	100 - 200 Ha	0 (25)	0
	200 - 300 Ha	1 (15)	530
	> 300 Ha	1 (6)	300
	Total	3 (60)	292

Table 6.9: (a) Hedges planted or removed over the past 15 years, and (b) hedges intended to be planted or removed in the next 5 years.

As with farm sizes, hedgerows appear to have been in a relative state of flux over the past 15 years, with almost 14 kilometres of hedgerow planted and 10 kilometres

removed - leaving a net surplus of almost four kilometres. As field boundary length is ultimately dependent on farm size, past trends in hedge planting/removal have been presented by farm size in Table 6.9 (a). From this table it is interesting to observe that none of the 16 smallest, most economically vulnerable farmers have removed hedges since 1981. This suggests that either (a) these farmers are dealing with the agricultural crisis through other means (i.e. diversification and pluriactivity), or (b) hedges on smaller farms had been largely removed prior to 1981 - although, possibly the best explanation is that there is a combination of the two factors operating. A number of smaller farmers commented in the course of the survey (generally in a relieved fashion) that they had pulled hedges out prior to 1981.

Further insight into the motivation behind hedge changes can be gained through analysing the relationship between hedge planting/removal and changes in farm size since 1987. Farmers who have removed hedges *in the past 15 years* are likely to have increased their farms by a greater area than farmers who have not removed hedges (Mann-Whitney $U = 257$, $N = 60$, $P = .042$). However, farmers who intend to plant hedges *in the future* are likely to have increased their farms by a lesser area than farmers who do not intend to plant hedges (Mann-Whitney $U = 234.5$, $N = 60$, $P = .049$). This suggests that those who purchase larger areas of additional farmland do so with the intention of rationalising the farm boundaries through hedge removal, i.e. they adopt a more businesslike approach to the land. Hedge planting appears to be part of a process of consolidation, whereas hedge removal is clearly part of an expansionist strategy.

The balance of hedge changes in the future appears to be heavily weighted towards planting (see Table 6.9b). Fourteen farmers intend to plant a total of almost 16 kilometres of hedgerow in the next 5 years whereas removal of only 1 kilometre is planned, leading to an increase (in favourable circumstances) of 15 kilometres of hedges. While this result is likely to represent the 'best case scenario' as no farmer would like to think they were to be forced by economics to remove hedges, it does suggest that under buoyant economic circumstances the hedgerow environment of the Marston Vale may be considerably enhanced.

6.4 Diversification, intensification and conservation

6.4.1 Diversification on the farm

As may be expected for an urban fringe area (Slee, 1987; Bryant & Johnston, 1993), on-farm diversification schemes are common-place in the Marston Vale with 58% of farmers having a diversification scheme of some form. Presence/absence of a diversification scheme appears to be associated with the younger farmers (Mann-Whitney $U = 306$, $N = 60$, $P = .045$) and, given that there is no significant difference in net income from agriculture between the diversified and non-diversified groups, appears to be used to boost farm income rather than as a survival strategy by constrained farmers (see Burton & Wilson, in press) - although this situation could change dramatically with worsening agricultural returns. On-farm diversification ventures and the average net farm income (%) they generate are listed in Table 6.10.

Diversification Enterprise	Number of farmers	Average % income
1. Rent industrial units	11	20
2. Contracting	9	19
3. Stables	5	8
4. Letting houses	4	6
5. Selling machinery	3	42
6. Construction	2	91
7. Teaching students	2	1
8. Traffic management	1	50
9. Butcher	1	50
10. Haulage fleet	1	30
11. Turf production	1	15
12. Odd jobs	1	13
13. Selling animal feed	1	11
14. Repair machinery	1	3
15. Sheepdog trialing	1	2
16. Tree nursery	1	1
17. Seed production	1	1
18. Caravan park	1	1
19. Bed and breakfast	1	1
20. Fish farm	1	1
No diversification	28	

Table 6.10: Diversification enterprises in the Marston Vale.

The schemes listed in Table 6.10 are predominantly business oriented, rather than representing an extension of agricultural roles (see Ilbery & Bowler's 1993 classification of diversification forms). The dominance of business structure forms is likely to be due to the proximity of the forest zone to the urban market, as access to market is an important factor in determining the type of diversification scheme employed (Slee, 1987). Schemes vary in terms of the degree to which they subsidise farm income and therefore the commitment they represent to non-agricultural production. While the majority of enterprises contribute less than 20% of the overall farm income and thus simply complement agricultural production, schemes such as construction (91% of income), traffic management (50%), running a butcher's shop (50%), selling machinery (42%) and running a haulage fleet (30%) represent a more substantial move into business roles.

6.4.2 Diversification on the farm since 1987

Reasons for diversification since 1987	Number of farmers
1. Farm not profitable	7
2. Worried about farming downturn	2
3. Opportunism	2
4. Encourage children to remain	2
5. Wholesale business	1
6. Job for spouse	1
7. Have people around (security)	1
8. Interest	1
9. Use empty buildings	1
10. Relaxed planning laws	1
No diversification	42

Table 6.11: Reasons for diversifying since 1987.

The farming crisis of the late 1980s may have encouraged a number of farmers in the Marston Vale to diversify their income base. Almost a third of farmers (30%) interviewed had diversified since 1987, half of these for the simple reason that the farm was no longer profitable and/or they were concerned about the future prospects for farming (see Table 6.11). There is also some evidence of entrepreneurial leanings amongst the farming community with two farmers submitting that their decision to

diversify was simple ‘opportunism’. This economic ‘opportunism’, along with an ability to accurately identify and exploit market niches, constitutes an important factor in defining an entrepreneur (Bryant, 1989). Future diversification plans (see Table 6.12) also reveal an element of entrepreneurship as, of the 15 farmers who plan to diversify, 7 had not yet committed themselves to a particular form. The table also suggests that a number of farmers are becoming more prepared to countenance leisure provision as a diversification scheme as ventures proposed include aeroplane fields, chalets, and a golf course. In contrast, current leisure-based diversification is limited to equestrian provision.

Diversification Enterprises planned for future	Number of farmers
1. Don't know/wait and see	7
2. Rent industrial units	3
3. Aeroplane field	2
4. Equestrian centre	1
5. Chalets	1
6. Tractor manufacture	1
7. Golf course	1
No diversification	45

Table 6.12: Future diversification schemes planned.

6.4.3 Intensification of production

While farming in Marston Vale is already a fairly intensive enterprise, a considerable proportion of farmers surveyed (42%) stated that they intend to further intensify agricultural production - largely as a survival measure (see Table 6.13). A further 27% of farmers stated they would not try to intensify production simply because it was not possible to do so. Farmers offering this response may be classified as ‘constrained’ in that their productivity is restricted through limitations in technology and farm-structure. In terms of tenure system and indebtedness, however, farmers who intend to intensify are more constrained than those who do not plan to intensify. While there is no difference in tenancy arrangements (presence or absence of owned/tenanted land, and area owned/tenanted land) between the ‘intensify’ and ‘won’t intensify’ groups, farmers

who intend to intensify production are more likely to be restricted by tenure agreements ($\chi^2 = 5.755$, d.f. = 1, $P = .037$), and carry some/heavy debt ($\chi^2 = 4.927$, d.f. = 1, $P = .026$) than farmers who do not plan to intensify.

Reasons for (or for not) intensifying production	Number of farmers
1. I can't get more intensive	16
2. To survive as a farmer you have to try	9
3. Profit or business strategy	4
4. Will do as technology develops	3
5. I'm happy with the farm as it is	2
6. It's the aim of all farmers	2
7. To support family on farm	1
No response/don't know	24

Table 6.13: Reasons for (or for not) intensifying production.

6.4.4 Conservation projects on the farm

Over half of farmers in the survey (58%) claimed to have undertaken 'purpose built' (specified to try to eliminate projects that might be considered incidentally advantageous for wildlife or conservation) nature conservation projects on the farm. However, a closer inspection of the schemes presented in Table 6.14 suggests that the majority of projects appear to be more incidentally advantageous than deliberately constructed for conservation - with the obvious exception of the butterfly conservation area, the otter habitat creation scheme and one farmer who loaned his machinery to the Woodland Trust. The large number of farmers who listed 'Dug out/cleaned pond' is an interesting case in point. Whilst this behaviour may have been conservation oriented - to open up the habitat for waterfowl - two farmers, [39] and [54], mentioned that the recent enforcement of water regulations has provided a strong financial incentive for local farmers to clean up their ponds.

Conservation projects on the farm	Number of farmers
1. Dug out/ cleared pond	19
2. Planted trees and/or hedges	10
3. Let alone to do own thing	3
4. Assist Woodland trust	1
5. Otter scheme	1
6. Butterfly conservation area	1
No conservation projects	25

Table 6.14: ‘Purpose built’ conservation projects on the farm.

In terms of subsidised schemes, five farmers were participating in the FWPS, four in the countryside stewardship scheme, one in an otter habitat creation scheme in an area outside of the Marston Vale Community Forest zone, and six farmers in a tree-planting scheme initiated by Bedfordshire County Council prior to the Community Forest. A hypothesis may be forwarded that these 15 schemes are more typical of a conservation scheme than the indicated ‘conservation’ projects as all involve additional commitment by the farmer in terms of a loss of agricultural ground, increased management time, and/or additional legal commitments entered into. Thus, for the later analyses, participation in subsidised schemes (combined with the unsubsidised butterfly conservation area and woodland trust assistance, which also meet the commitment criteria) was taken as the measure of conservation projects on the farm rather than the self-proclaimed conservation behaviour.

6.5 Constraints to land-use

6.5.1 Farmer borrowing and debt

Farmers in the Marston Vale Community Forest area appear to have few problems with debt (see Figure 6.6) and, what debt there is, is more strongly associated with borrowing capital for the purchase of additional land since 1987 ($\chi^2 = 5.390$, d.f. = 1, $P = .020$) than with any features suggesting economic marginalisation such as farm size (N.B.

Those with debt have *larger* farms : Mann-Whitney U = 322.5, N = 60, P = .117) or income (Mann-Whitney U = 410.5, N = 60, P = .816). Those operating under debt constraints are more enthusiastic about intensifying agricultural production in the future ($\chi^2 = 4.928$, d.f. = 1, P = .026), probably due to both the necessity of repaying the debt, and the increased commercial viability of the enlarged farm.

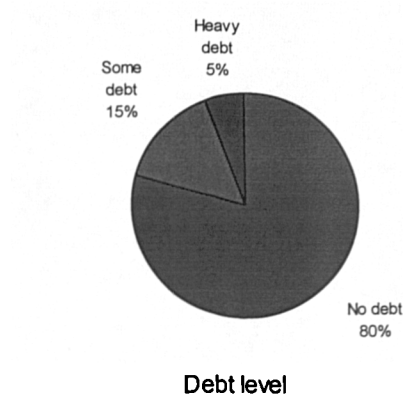


Figure 6.6: Farmer debt in the Marston Vale.

6.5.2 Problems with planning system

Problems with the planning system (see Table 6.15) centred on restrictions to the construction and/or use of farm buildings and attempts to obtain permission to change land designations - particularly for development land. One farmer had a direct problem with the Community Forest designation on the area, as his landlord has withdrawn land for a Community Forest wetland scheme (associated with a waste disposal runoff area).

Problems with planning system	Number of farmers
1. Prevent/restrict farm buildings	10
2. Prevent development of land	3
3. Restrict type of diversification	2
4. Won't allow demolition of building	1
5. Community Forest has taken land	1
6. Landlord may take land if houses planned	1
7. Won't let us clean out woodland	1

Table 6.15: Planning restrictions to farm development.

6.5.3 Tenancy restrictions

While planning restrictions did not constitute a major constraint to farmer decision-making in the Vale, tenancy arrangements were even less constraining (see Table 6.16). Much of the rented land in the valley bottom is designated for mineral extraction and possible development; therefore many tenant farmers play a caretaker role - or, as one of the Shuttleworth tenants [farmer 15] referred to himself as the “peasant who keeps the place looking tidy until somebody turns it into money.” The caretaker status does, however, conflict with any farmers who are attempting to maintain farm profitability through diversification, as many landlords are either opposed to development or insist on a sufficiently higher rent to make the project financially unattractive. Recently introduced short term tenure systems are also restricting decision-making for some farmers as rents are substantially higher, requiring more intensive agricultural production to maintain profitability whereas a less intensive form would be preferred.

Tenure restrictions (36 tenant/mixed tenure farmers)	Number of farmers
1. Must be aware of landlord's interests	4
2. Landlord won't allow diversification	3
3. Have to farm intensively to pay high rent	2
4. Landlord discouraged me from tree planting	2
5. Landlord stipulates what you grow	1
6. Landlord will take land for gravel	1
No restrictions	23

Table 6.16: Tenancy restrictions on land-use.

6.6 Farmer characteristics

6.6.1 Stage of the life-cycle

Recent studies have shown that the stage of the life cycle (both age and successional arrangements) is an important consideration when investigating agricultural behaviour (e.g. Potter & Lobley, 1996). Figure 6.7a shows that the Marston Vale area is fairly dynamic in terms of the succession of farmland, with farmer ages fairly evenly

distributed throughout the age groups. Almost half of the farmers in the sample were over 50 years old, with a considerable proportion of those (20% of all farmers) being close to retirement age. Of these 12 farmers, only two have not found successors for their holdings (Figure 6.7b).

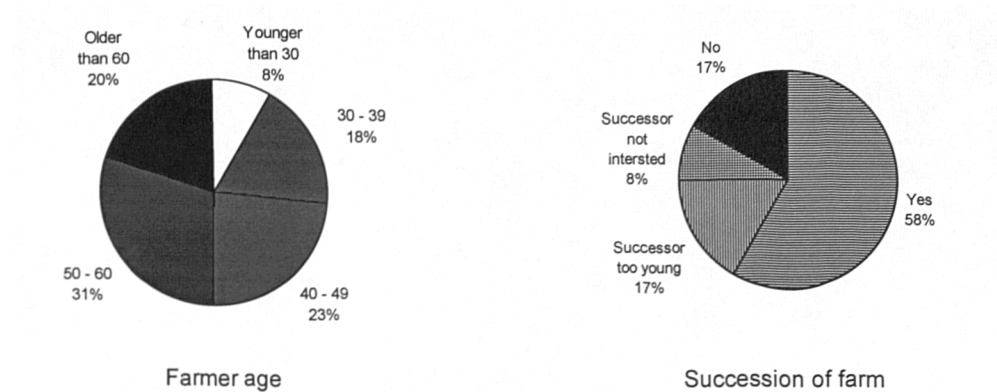


Figure 6.7: (a) Age distribution of respondents, and (b) successional plans for the farm.

Farm succession plans can be divided into three groups: (a) fifteen are either without successors, do not want their children to succeed them or their successors are not interested in the farm; (b) ten hope their sons or daughters will succeed them but are too young or currently undecided; and (c) thirty five have already established a successor to the farm. Farmers who already have a successor to take over the farm have both significantly larger farm sizes (Kruskal-Wallis $H = 10.046$, d.f. = 2, $P = .007$) and significantly higher incomes than the other two groups (Kruskal-Wallis $H = 13.306$, d.f. = 2, $P = .001$). The results suggest that farm income may be an important factor in finding a successor to the farm, as farmers without successors have the lowest income levels of the three groups (No successor median rank = 18, successor undecided/too young = 26, successor established = 39).

6.6.2 Education

Figure 6.8 shows the educational profile of farmers in the Marston Vale study. Thirty per cent of the farmers surveyed had no formal qualifications and, at the other end of the scale, 7% had degrees. For analysis, farmers were divided into two groups (a) farmers with no formal qualifications, and (b) farmers with formal qualifications. An additional

division could have been made for farmers of A-level and above standard to represent higher levels of achievement. However, (a) there are relatively few farmers in this category, and (b) without investigating the nature of their learning experiences in greater detail any meaningful division of the educational categories on a more-to-less educated basis would be difficult to achieve (i.e. How do you compare a diploma in agriculture to a degree in surveying?).

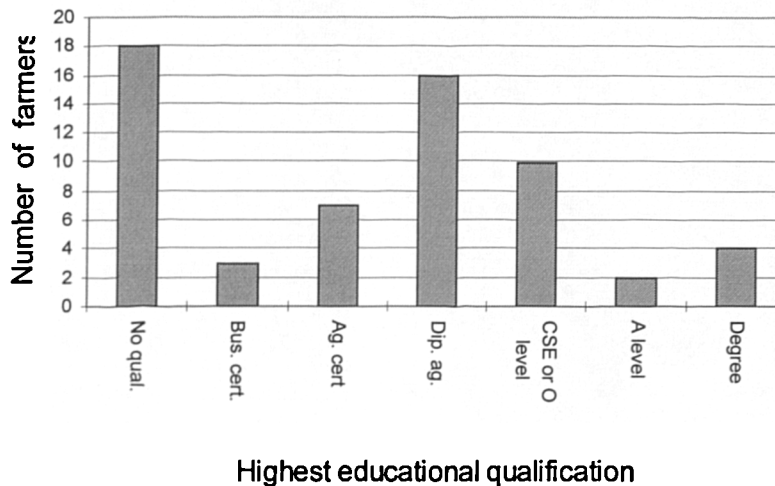


Figure 6.8: Highest educational qualification of respondents.

Although previous studies (e.g. Wilson, 1996) have noted a ‘correlation’ (sic - the relationship was in fact an association) between educational achievement and conservation behaviour, the evidence for this contention here is weak and contradictory. There is an almost significant relationship between having formal qualifications and the existence of a subsidised conservation scheme on the farm ($\chi^2 = 3.756$, d.f. = 1, $P = .053$), suggesting that farmers without formal education are less conservationist. However, these farmers are also less likely to have removed hedges in the last 15 years (Fisher’s Exact, $P = .023$), which could suggest they are, in this case, responding to difficulties in agriculture in a more conservation minded fashion. The most likely explanation is that farmers with no formal education are simply older than educated farmers, and that such status quo oriented ‘conservation’ behaviours reflect their unwillingness to change (e.g. Shucksmith, 1993). Thus, the results of this study do not allow any direct conclusions to be drawn on the relationship between education and conservation behaviour.

6.7 Summary and conclusion

The farm/farmer characteristics described in this chapter provide a picture of a relatively profitable and well established arable farming community. They have no substantial experience of major woodland planting but wide experience in small-scale tree planting. In general, it appears that the majority of farmers intend to carry on farming in the manner they have in the past despite the presence of the Community Forest. There is evidence, however, to suggest that different sections of the farming community may be responding to changes in the agricultural industry with differing agricultural strategies; for example, tenant farmers and/or those with debts through intensifying production. The question dealt with in the following chapter is whether farmers from different identity sub-cultures are responding differently and, if so, how the response varies between the groups.

Chapter 7: Farmer role-identity at the sub-culture level: implications for decision-making

7.1 Introduction

In Chapter 5 a methodology for the investigation of the role of farmer self-identity in determining choice of role-behaviour was established. The first stage of applying this methodology is to establish the existence (or otherwise) of the proposed identity sub-cultures within the Marston Vale. Thus, in this chapter the quantitative methodology outlined in Chapter 5 is applied and a description of the four proposed identity sub-cultures gradually built up through (a) conducting a principal components analysis of the data from the role-behaviour index to establish whether any distinct strategies can be identified from the role data, (b) conducting a cluster analysis of the same data to enable individual farmers to be grouped into the four hypothesised behavioural groups, (c) conducting between group comparisons on the identity groups based on factor scores from the PCA and independent behavioural data to confirm the validity and provide a description of the groups, and (d) conducting between group comparisons of the identity groups based on self-reports of identity salience and commitment to establish whether farmers within these groups recognise themselves as such. Finally, having built up a profile of the identity sub-cultures, the implications they may have for the uptake of the Community Forest scheme are discussed.

7.2 Farming strategies - results of the PCA analysis

In order to identify and label the groups produced by the cluster analysis, it is first useful to investigate the role-behaviour index for any factors underlying the response. Statistical analysis of between group differences in factor scores from the PCA enables farmer groups to be labelled according to their preferred role-strategies (i.e. groups of roles with similar underlying constructs). This section presents the principal components

analysis of the role-behaviour index performed by using procedures outlined in section 5.3.2.3 of the methodology chapter. The analysis identified seven factors from the role-behaviour index, significant loadings of which are presented in Table 7.1 (see Appendix vi for the full table). In the table, where each factor may be taken as a farming role-strategy, positive loadings represent roles that should be performed, and negative loadings those that should not (counter-roles). The significance levels indicated have been calculated using the Burt-Banks formula (see Childs, 1970) to take account of the sample size and factor number.

<u>Factor 1</u>	Eigenvalue = 3.48 / % variance = 18.3 / sig. level = .328
Establish/use woodland for commerce	.84
Experiment with land-use decisions	.58
Borrow capital to invest in agriculture	.54
Make money through diversification	.52
Learn new (non-agricultural) business skills	.44
 <u>Factor 2</u>	 Eigenvalue = 2.37 / % variance = 12.5 / sig. level = .337
Nature conservation number 1 priority	.74
Create new wildlife habitat	.67
Preserve wildlife habitat	.64
Borrow capital to invest in agriculture	-.47
 <u>Factor 3</u>	 Eigenvalue = 1.73 / % variance = 9.1 / sig. level = .346
Encourage children to farm	.83
Expand farm size	.77
 <u>Factor 4</u>	 Eigenvalue = 1.44 / % variance = 7.6 / sig. level = .358
Listen to environmental groups	-.78
Use environmentally friendly practices	-.65
Respect traditional values	-.42
Invest in non-farming enterprises	.39
 <u>Factor 5</u>	 Eigenvalue = 1.38 / % variance = 7.3 / sig. level = .369
Maximise profit	.77
Mix with urban people	-.65
 <u>Factor 6</u>	 Eigenvalue = 1.24 / % variance = 6.6 / sig. level = .382
Involve family in running the farm	-.74
Use new technology	.57
Make money through diversification	.49

Factor 7 Eigenvalue = 1.05 / % variance = 5.6 / sig. level = .396

Regard farming as a life-style	.86
Respect traditional values	.51
Learn new business skills	-.40

Table 7.1: PCA of 19 items from the role behaviour index (excludes ‘leave land more productive’ because of skewed distribution).

7.2.1 Labelling the components

The first component represents diversion from traditional conservative agricultural roles. In particular the high loadings on “establish or use woodland for commerce” and “experiment with land use decisions” suggest a willingness to use agricultural land for unconventional or non-agricultural purposes. Inclusion of the “borrow money to invest in agriculture” role-behaviour may reflect that performing diversifier roles is associated with increasing the commercial viability of the agricultural enterprise or, alternatively, a greater willingness/need to risk capital. Because of its emphasis on experimentation, diversification and non-agricultural business skills, this component may be termed a “Entrepreneurial/diversification strategy.”

The second component suggests a strong emphasis on conservationist roles in agricultural decision-making, in particular the preservation and creation of wildlife habitat. A significant negative loading on “borrow money to invest in agriculture” may reflect either a connection between conservation priorities and the profitability of the farm (the connection is often cited, e.g. Wilson, 1996; Cary & Wilkinson, 1997) or the rejection of an intensive farming approach. The strong emphasis on conservation enables this component to be termed the “conservation strategy”.

The third component represents an approach that may be defined as a “succession-oriented strategy”. This factor is expressed by two role-behaviours with high significant loadings: “take any opportunity to expand your farm size” and “encourage your children to become farmers.” A comparison between farmers with a designated successor and those without and the factor scores for this component showed that farmers with a

successor placed greater emphasis on this role-strategy than those without (Mann-Whitney $U = 124$, $N = 60$, $P = .015$).

Component four is defined largely by counter-roles - in particular rejection of conservationist and traditional farming roles. Significant negative loadings on “listen to the advice of environmental groups”, “use environmentally friendly practices” and “farm in a manner that respects all the traditional farming values” suggest that this strategy involves exploitative land-use or the regarding of land as a commercial commodity. The component with a positive loading “invest in non-farming enterprises such as the stock market” was suggested by farmers in the preliminary survey as typical of the agribusiness approach. Consequently the approach is termed the “commercial-agribusiness strategy.”

The fifth component is more difficult to define. Only two significant loadings were identified, “have maximising profit as the number one priority” and a negative loading on “mix with a wide range of urban people”. The rejection of socialising outside the farming community suggests this strategy is associated with an agricultural approach and the emphasis on profit implies commercial strategy. This time, however, the commercial strategy does not involve extending capital outside of the farm as is evidenced by the high negative (but non-significant) loading on “invest in non-farming enterprises such as the stock market” (-.28 - see Appendix vi). This component is thus labelled as the “commercial-productivist strategy” reflecting the strong ties with agriculture rather than the more progressive agribusiness approach towards capital accumulation.

Component six represents another diversification oriented vector. While it does not appear to have any clear definition, the vector shows consistently lower loadings on diversification items that involve alternative land-use, namely “experiment with land use decisions” (Factor 1 = .57, Factor 6 = .17) and, in particular, “establish woodland for commercial purposes” (Factor 1 = .84, Factor 6 = -.23). This suggests the strategy comprises a more conservative, agriculturally based approach to diversification involving new technologies and business skills - rather than experimentation with agricultural land. The high negative loading on “involve the family in running the farm”

is curious as there is no suggestion that farmers with low factor scores had smaller farm sizes (and thus less work for the family), were less diversified (in terms of % of income), or were less likely to have a successor than other farmers. The overall direction of the vector appears to be a compromise between conservative agricultural production and diversification, enabling it to be loosely termed a “Conservative-diversification strategy.”

The final component clearly represents a “conservative/traditional agricultural production strategy.” Significant loadings on “respect traditional farming values”, “learn new business skills (negative)” and, particularly, “regard farming more as a life-style than a business” suggest a more conservative approach to agriculture is being employed.

From the descriptions of the seven factors it appears that the PCA has identified the four main ‘farming strategies’ of ‘commercial agribusiness’, ‘entrepreneurial diversification’, ‘conservation’ and ‘conservative agricultural production’ and three additional strategies of ‘succession’, ‘commercial productivism’, and ‘conservative diversification’. The result suggests the pattern of role-behaviour in the Marston Vale is more complex than suggested in the conceptual chapters, with more than one role-based approach to diversification existing and succession operating as a separate factor in its own right. In general, however, the analysis suggests that there are a number of farming strategies that farmers may employ in the Marston Vale relating to the four main alternatives for post-productivist agriculture.

7.2.2 The compatibility of strategies

Analysis of the correlation matrix of the factors (Table 7.2) provides an indication of the compatibility of the strategies. The table shows that the diversification strategy is widely compatible with the conservation, succession, and conservative-diversification strategies, but incompatible with both the productivist and conservative/traditional agricultural production strategies - particularly with the conservative/traditional approach. The conservationist strategy appears to be incompatible with the more exploitative agribusiness approach - as may be expected given the significant negative loadings on conservationist behaviours for the agribusiness component. Perhaps the

most interesting result is that the conservative/traditional agricultural production strategy appears incompatible with the pursuit of a successional strategy.

Strategy	Divers	Conser	Succes	Agbus	Prodct	C-divr
Conservation	++					
Succession	+					
Agribusiness		--				
Productivist	-					
C-diversification	+					
Traditional	---		-			-

Table 7.2: Correlations of factors I to VII of the PCA. Correlation coefficients have been indicated on the table using '+' and '++' for positive coefficients of greater than .10 and .15 respectively, and '-', '--', and '---' for negative coefficients of greater than .10, .15, and .20 (see Appendix vi for the full correlation matrix).

If each role-strategy represents a potentially different approach to farming, and identity theory is correct in its assumption that role-performance leads to the internalisation of the role - or what Turner (1978, 1987) terms the 'role-person merger' - then farmers following different farming strategies should maintain different self-identities. Thus, as previous researchers have suggested, there should be a number of different 'farmer identities', 'farming styles' or 'habitus' (respectively, Seabrook & Higgins, 1988; Van der Ploeg, 1993; Shucksmith, 1993) evident in the Vale that broadly follow these strategies. The next stage of the analysis is therefore to investigate whether the farmers can be clustered on the basis of preferred role-performance into meaningful identity groups at the subculture level.

7.3 Identity sub-cultures - the application of cluster analysis

7.3.1 The cluster analysis

Investigating the existence of farmer identity types requires that the individual farmers first be classified into distinct groups on the basis of similarities in preferred role

performance. To achieve this a similarity measure - the hierarchical cluster analysis procedure described in the methodology chapter (Section 5.3.2.3) - was used. The dendrogram produced through clustering the data set using Ward's method standardised by range (see Chapter 5 for description) is shown in Figure 7.1 (over-page).

Whereas in inductively applied cluster analyses partitioning of the dendrogram into the final array of clusters can be a contentious issue (see Ludwig & Reynolds, 1988; Kent & Coker, 1992; Jackson, 1993), for this *deductive application where four theoretical identities were predicted* the cluster was to be divided into four groups. This was on the proviso that they met the criteria laid out by Jackson (1993) that (a) none were so large as to pre-empt a majority of respondents (thus probably containing an unacceptably high level of within group variance) and (b) none were so small that they would have to be excluded from further statistical analysis. In the event the clustering process divided farmers into four relatively even-sized groups: Cluster 1 (10 farmers), Cluster 2 (18 farmers), Cluster 3 (15 farmers) and Cluster 4 (17 farmers). In order to confirm the validity of the clusters as representing the four hypothesised identity groups, analysis of variance tests were conducted; first, with the component scores from the PCA and, secondly, with farm/farmer characteristics data gathered from the quantitative investigation. This process, which also enabled the nature of the 'identity' groups to be defined, is outlined below.

7.3.2 Comparison of clusters with component scores or 'farming strategies'

Investigating the identity structures of the clusters first involved a comparison of the four clusters and the four farming role factors identified through the PCA. Component scores derived in the analysis were tested for between group differences using the Kruskal-Wallis H - test, and the results are presented in Table 7.3 (note that the between group differences in the productivist and commercial diversification strategies are only significant at the 90% level). A description of the groups based on their farming strategies can be compiled from the table as follows:

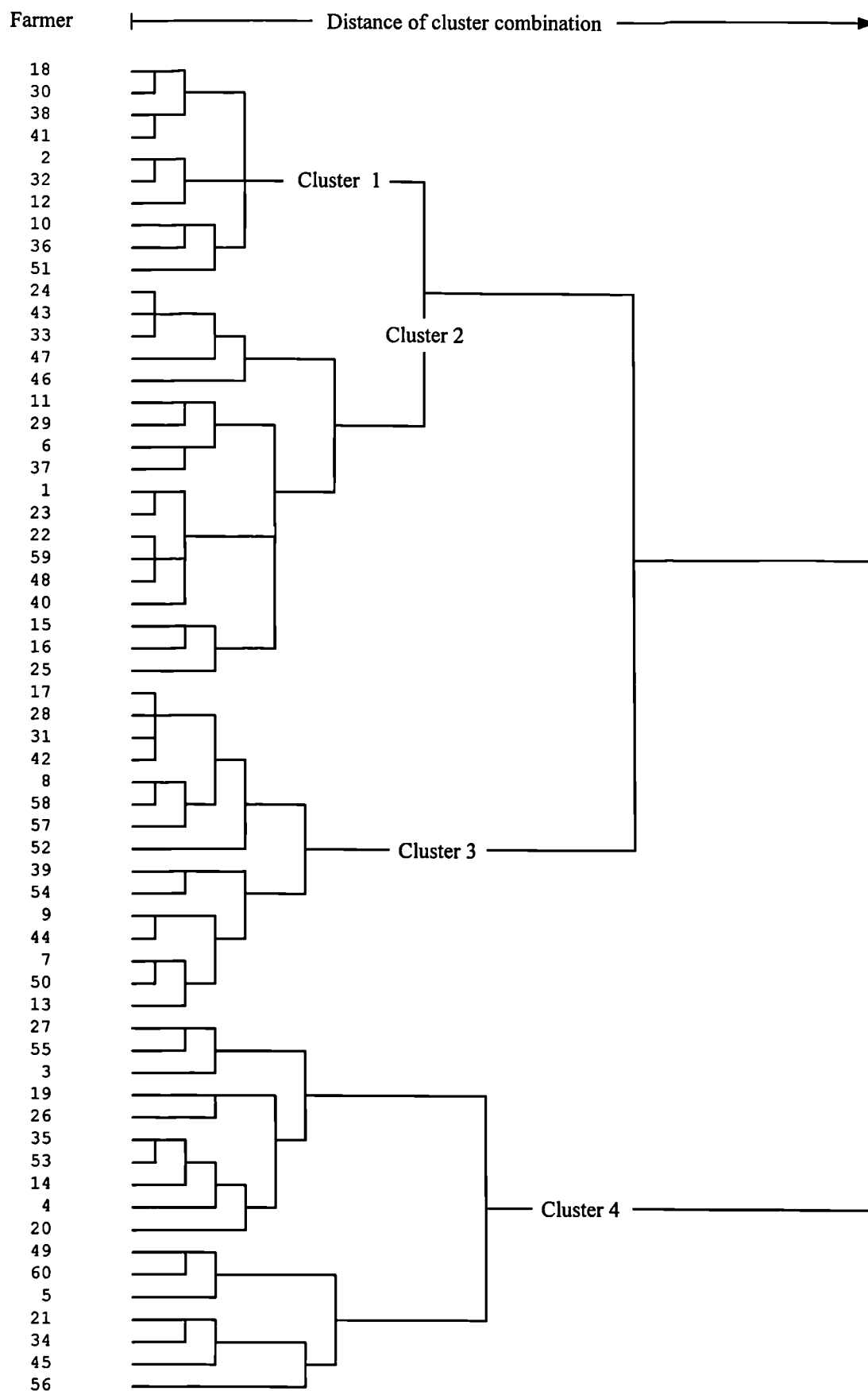


Figure 7.1: Cluster Analysis (Ward's linkage, Squared Euclidean distance, variables standardised by range) of farmers in Marston Vale based on results of the role-behaviour index.

Agricultural strategies (factor scores)

<u>Cluster</u>	Divers	Conser	Succes	Agbus	Prodc	C-divr	Trad
1. Agribus	32.30	32.40	<u>21.90</u>	<u>18.50</u>	42.60	39.20	28.00
2. Diversf	<u>19.94</u>	40.67	<u>36.17</u>	<u>22.39</u>	29.44	<u>24.78</u>	40.50
3. Conserv	20.87	<u>10.20</u>	22.67	46.20	31.53	<u>25.67</u>	31.07
4. Ag.prod	49.12	36.53	36.47	32.29	<u>23.59</u>	35.71	<u>20.88</u>
H - stat	30.56	28.51	9.32	20.91	7.58	7.07	11.27
P =	.0000	.0000	.0253	.0001	.0555	.0696	.0103

Table 7.3: Mean rank component scores for cluster groups 1 to 4 as determined by the Kruskal-Wallis H test (d.f. = 3). Underlined scores represent the group with the *highest* association with the strategy, and ***emboldened and italicised*** scores that with the *lowest*.

Cluster 1 - accumulator-agribusiness: Farmers in group 1 place considerable emphasis on the successional and agribusiness strategies and relatively low emphasis on the more conservative, diversification, and conservation aspects of farming. This suggests these farmers have adopted an accumulative or commercial approach to farming where land acquisition and continuing the family tradition in farming are both important. Members of this group may thus be labelled ‘accumulator-agribusiness’ farmers.

Cluster 2 - Entrepreneur/diversifier: This group consists of farmers for whom the diversification strategies are of primary importance, in particular, the entrepreneurial diversification strategy. It also shows elements of a more commercially exploitative approach to farming with farmers also placing a high emphasis on the commercial/agribusiness strategy. In contrast, both the conservationist and conservative/traditional agricultural producer strategies are of little importance.

Cluster 3 - Conservationist: Farmers in this group appear to place greater emphasis on the nature conservation strategy than other farmers and, in addition, place high importance on the successional and diversification strategies. Only the commercial/agribusiness approach features strongly as a counter-strategy for this group: which is perhaps to be expected as this factor is largely defined through the rejection of conservation and traditional roles.

Cluster 4 - Conservative/traditional: Cluster 4 farmers tend to follow either a conservative/traditional agricultural production or the commercial/productivist strategy and reject the entrepreneurial/diversification and successional strategies. The fact that the successional strategies are rejected when 'encourage your children to become farmers' was identified in the preliminary study as typical of the traditional agricultural producer identity suggests that farmers in this group are not at a stage in the life-cycle where successional factors are important. Either the successor has been appointed or there is no successor available.

The above analysis of between group differences in farming strategies suggests that the classification system has produced four meaningful farmer clusters, with each following a particular approach to farming. However, as both the classification of farmers and the farming strategies are taken from the same data set, the analysis provides no independent confirmation of the validity of the groups. For this another analysis was conducted comparing independent behavioural measures (the farm/farmer characteristics) with the four cluster groups.

7.3.2 Establishing external validity

The analysis of between group differences was divided into two separate analyses on the basis of the format of the questionnaire data. Interval and ordinal data were examined using the Kruskal-Wallis H test for between group differences (Table 7.4), whereas frequency data were analysed using either the chi-square test or, where the frequency matrix failed to meet the criteria for the chi-square test, Fisher's exact test (Table 7.5). The small sample size ($N = 60$) meant that, for the tests of association, between group comparison involving all four groups was difficult as the minimum 4 by 2 matrix rarely contained less than 20% of cells with an expected value of less than five (as is required for the chi-square test - Sokal & Rohlf, 1995). Thus, rather than looking for differences across all groups, comparisons were made between each group and the remaining three groups combined. Whilst it would be preferable to conduct the association tests with all four groups simultaneously, the result does provide an indication of how the individual groups differ from the sample as a whole (e.g. whether the 18 'diversifier' farmers are

more likely to have diversified than the remaining 42 'non-diversifier' farmers). Tables 7.4 and 7.5 show only significant variables.

<u>Farm or farmer feature</u>	<u>Cluster group</u>				K-Wallis 1-Way anova
	Cluster 1 agribus (n = 10)	Cluster 2 diversf (n = 18)	Cluster 3 conserv (n = 15)	Cluster 4 Ag.prod (n = 17)	
Age	21.75	23.72	33.17	<u>40.47</u>	H = 11.502 P = 0.0093
Years family on farm	31.85	20.58	34.10	<u>37.03</u>	H = 8.8934 P = 0.0307
Farm area owned	<u>43.10</u>	22.03	31.97	30.76	H = 9.6335 P = 0.0220
Amount of woodland	<u>41.40</u>	24.75	35.10	26.12	H = 8.0418 P = 0.0452
Future tree planting (area)	<u>37.90</u>	29.92	36.00	21.91	H = 8.5157 P = 0.0365

Table 7.4: Differences in farm or farmer features between the groups as defined by the cluster analysis. Underlined scores represent the group with the *highest mean rank* for the variable (e.g. oldest farmers, largest farm area owned), and **emboldened and italicised** scores the *lowest* (e.g. youngest farmers, smallest farm area owned).

Farm or farmer feature	<u>Cluster group</u>			
	Cluster 1 Agribus (n = 10)	Cluster 2 Diversf (n = 18)	Cluster 3 Conserv (n = 15)	Cluster 4 Ag.prod (n = 17)
Management consultants important	(F) <u>Higher</u> P = .0079			
History of Woodland management	(F) <u>Higher</u> P = .0115			
Make joint decisions on the farm	(F) <u>Higher</u> P = .0340			
Plan to diversify in the future		(F) <u>Higher</u> P = .0475		(F) Lower P = .0458
Prevented from development		(χ^2) <u>Highe</u> <u>r</u> P = .0493		
Advice of the NFU important		(χ^2) Lower P = .0421		
Have planted trees on farm		(χ^2) Lower P = .0039		
Conservation scheme on the farm			(F) <u>Higher</u> P = .0207	

Plant trees in the future	(χ^2) Lower
Planted hedges in last 15 years	P = .0195 (F) Lower
Plant hedges in next 5 years	P = .0026 (F) Lower
Have no formal education	P = .0060 (χ^2) <u>Higher</u>
	P = .0022

Table 7.5: Differences in farm or farmer features between individual farmer groups as defined by the cluster analysis and the remaining 3 farmer groups combined. Higher indicates that the farmers from the indicated group have a higher probability of displaying the farm/farmer feature and **Lower** a lower probability. (F) indicates that Fisher's exact test was used and (χ^2) that the chi-square test was used.

In addition to these significant relationships, an important non-significant relationship emerged from the analysis in that there was no significant difference in total net income between the four groups (Kruskal-Wallis = 1.737, d.f. = 3, P = .629), suggesting that all farming strategies were equally economically viable at the time of the survey. From Tables 7.3, 7.4 and 7.5 the definitions of the farmer groups developed in the previous section can be elaborated as:

Cluster 1: Commercial/agribusiness

Farmers in the commercial/agribusiness group are significantly younger (Kruskal-Wallis, P = .009)¹, own larger areas of farmland (Kruskal-Wallis, P=.022), and are more likely to employ management consultants (Fisher's exact, P = .008) than farmers who are not in the group. Whether because of the larger farm area to be managed or the younger age of this group (suggesting a lack of experience), farmers in this group were more likely to make decisions about the farm jointly (Fisher's exact, P = .035). Farmers in this group also had significantly larger total areas of woodland (Kruskal-Wallis, P = .045), were more likely to have a family history of woodland management (Fisher's exact, P = .011) and were likely to plan to plant larger areas of woodland in the future (Kruskal-Wallis, P = .036). These factors are likely to be related as the economically viable area of woodland is dependent on the total area of the farm (Slee, 1987) - and the

¹ H-statistics for the Kruskal-Wallis analyses are provided in Table 7.4 if not stated.

family history of woodland management to the presence of larger areas of woodland. Of the relationships that neared significance, farmers in this group had the lowest proportion of income from diversified sources, suggesting an emphasis on agricultural production as a means of income generation (Kruskal-Wallis, $P = .085$). This emphasis on agricultural production is supported by the finding that they were almost significantly less likely to believe farmers would seriously consider leisure provision as a means of generating income (Fisher's exact, $P = .056$). All farmers in this group were brought up on the farm.

Cluster 2: Diversifiers

The most interesting feature about the 'diversifiers' group was that, although results from the PCA suggest they pursue a diversification led strategy, they were no more likely to have diversified than farmers outside of the group ($\chi^2 = 2.040$, d.f. = 1, $P = .153$). They were, however, more likely to plan diversification schemes in the future (Fisher's exact, $P = .047$), and - related to their pro-diversification strategy - were more likely to have had problems in obtaining planning permission for farm developments than other farmers ($\chi^2 = 3.865$, d.f. = 1, $P = .049$). The PCA (see Table 7.1) suggested that this group may attach lower importance to agricultural roles and support for this is found in the significantly lower importance attached to advice from the NFU ($\chi^2 = 4.133$, d.f. = 1, $P = .042$). Farm families in this category are easily the most recent arrivals (Kruskal-Wallis, $P = .031$) with families having been on the farm for an average of 40 years in comparison to 60 years for the Commercial/agribusiness group - the next most recent arrivals. As more recent arrivals to the area, diversifier farm families have had less time to build up the agricultural business and they therefore own significantly smaller units of farmland than the other groups (Kruskal-Wallis, $P = .022$). The lack of farmland and a shorter tradition in agriculture are two possible explanations for the willingness of farmers in this group to diversify.

It is interesting that, although income is strongly correlated with farm-size (Spearman's $r = .5666$, $P < .001$), there is no significant difference between the 'diversifiers' agricultural income and that of the other groups (Mann-Whitney $U = 352$, $N = 60$, $P = .680$). For this to occur, farmers in group 2 need to extract a higher income per hectare

of land in agriculture than farmers in the other groups - in other words, farm the land more intensively. There is some evidence to support this in that farmers in this group obtain a higher net income per hectare from agriculture than the remaining three groups (Diversifier mean = £280 per hectare, other groups mean = £200 per hectare. N.B. there are no significant differences in crops/livestock grown) and there is a weak association approaching significance at the 90% level between the diversifier group and planning to intensify agricultural production in the future ($\chi^2 = 2.376$, d.f. = 1, $P = .123$). During a recession farmers with small farm sizes and a dependency on intensive production for agricultural profitability would be in a poor position without a secondary source of income, i.e. diversification. Diversification may thus be a guard against recession. Again there is some evidence to support this. While a weak association suggests diversifier farmers were more likely than others to have diversified since 1987 (i.e. during the recent farm crisis) ($\chi^2 = 2.592$, d.f. = 1, $P = .107$), when the chi-square analysis was controlled by whether they farm tenanted land the relationship became significant ($\chi^2 = 4.130$, d.f. = 1, $P = 0.04$). In other words, the additional financial pressure of keeping up rent payments may have pushed farmers in this group into increasing their dependence on the diversifier strategy. As may be expected for younger farmers practising intensive cultivation, farmers in this group are significantly less likely to have planted trees on the farm ($\chi^2 = 8.341$, d.f. = 1, $P = .004$).

Cluster 3: Conservationist farmers

Farmers in cluster 3 were more likely to have a subsidised conservation scheme (e.g. Countryside Stewardship schemes, a butterfly habitat area, a wildlife conservation area with pond and tree-planting, an otter habitat creation scheme) on the farm (Fisher's exact, $P = .021$). They were also likely to intend planting relatively large areas of trees in the future - with a mean ranking of the Kruskal-Wallis similar to that for agribusiness farmers even though the total farm area owned was substantially smaller (Conservationist mean = 149 hectares, agribusiness mean = 263 hectares). This emphasis on future tree planting may explain why the importance of advice from the Community Forest team (which provides free consultations on tree-planting) was almost significantly more likely to be associated with the conservationist group (Fisher's exact, $P = .058$). It appears from the Kruskal-Wallis analyses that farmers who can afford to

adopt a conservationist approach are relatively well established in the area as the group bears greater resemblance to the conservative/traditional agricultural producer group than to the agribusiness and diversifier groups in terms of age and number of years of farm occupancy. While there is clearly a conservationist emphasis in this group, the lack of more definite between group differences may be attributable to the fact that, unlike the other groups, conservation as a farming strategy is not an economic strategy but rather a lifestyle strategy - therefore it may be more readily conducted in tandem with other strategies (with the exception of the commercial/agribusiness strategy).

Cluster 4: Conservative/traditional agricultural producers

The conservative/traditional agricultural producers cluster is characterised by farmers who have made few changes to the farm structure in the past and do not plan to change the farm in the future. In terms of field boundary changes, conservative/traditional agricultural producers are less likely to have planted hedges in the last 15 years (Fisher's exact, $P = .003$), to plan to plant hedges in the next 5 years (Fisher's exact, $P = .006$) or to plan to plant trees/woodland in the future ($\chi^2 = 5.454$, d.f. = 1, $P = .019$). In terms of changing their approach to farming, while farmers in the group are equally likely to have a diversification scheme on the farm (Fisher's exact, $P = .266$) they are less likely to intend to diversify in the future (Fisher's exact, $P = .046$) and, although the result is only significant at the 90% level, there is also evidence to suggest that farmers in this group are less likely to intend to intensify production in the future ($\chi^2 = 2.910$, d.f. = 1, $P = .088$). This conservative outlook on farming may be attributable to the age of the farmers - which is significantly greater than for the other groups (Kruskal-Wallis, $P = .009$). This may in turn be responsible for the increased likelihood that farmers in this group have received no formal educational qualifications ($\chi^2 = 9.384$, d.f. = 1, $P = .002$). The anti-change 'conservative/traditional' cluster is the most distinct of the farming identities. The dendogram (Figure 7.1) suggests that this group of farmers have the lowest level of similarity with the remaining farmer groups and, in the preliminary tests for the robustness of the cluster technique, this group proved to be the most robust (i.e. least likely to be affected by different cluster algorithms).

Farm/farmer characteristics confirm and expand on the findings of the PCA - that the four groups identified by the cluster analysis represent farmers who are pursuing distinctly different agricultural strategies. A final test for the reliability of the groups can be made through the comparison of the above typology with independent typologies presented in the literature. Of particular interest is Shucksmith's (1993) social classification of farm households in upland Scotland on the basis of the "values and motivations which underlie behaviour" (P466). Shucksmith used panel surveys to construct ideal types of 'accumulative', 'conservative', and 'disengager'² farm households. He then subjectively classified each of 300 farmers involved in the 'Final Survey' into these three groups and summarised the farm/farmer characteristics of the respective groups. As a result of the classification and analysis of farm features he listed the characteristics of the accumulator group as: "*Accumulators* on the whole are found to have larger farms, work longer hours and are younger on average than conservatives. They are significantly better educated, many having an agricultural training to diploma/degree level. Bearing this in mind, they are more likely to consult advisory services and to take up training courses" (P469). The *conservative* farmers are defined as "Farmers who are traditional in their outlook, conservative in farming techniques, and strongly resistant to changing the farm structure. They are strongly committed to farming as a way of life" and, in addition, are the "most reluctant to undertake non-agricultural activities on their land" and mostly "inherit or succeed to a tenancy" (P469). Finally, *disengagers* (diversifiers) are defined as "Those who are decreasing their commitment of land or labour to agriculture. Their defining characteristic is the increasingly residual role attributed to agriculture" (P469).

It is evident that the three groups identified by Shucksmith bear a strong physical resemblance to the 'Agribusiness' (Accumulator - larger farms, younger, better educated than conservatives, consult advisory services)³, 'Conservative/traditional agricultural producer' (Conservative - older, traditional, resistant to change, farm as a life-style, committed to agriculture), and 'diversifier' (Disengager - residual role for agriculture) clusters. Other researchers have identified groups with similar principal characteristics.

² A similar classification system in terms of its recognition of the accumulator and disengagers (diversified) post-productivist strategies was suggested by Ilbery (1988), however the study provided no comprehensive description of the behavioural characteristics of the groups.

³ With the focus on tradition and resistance to change this group in this study and also has similarities to Potter and Lobley's (1996) 'stabilisers' group.

For example, Battershill & Gilg (1996) distinguish ‘accumulator/ agribusiness’ farmers (commercial farmers - larger farms with younger farmers and a willingness to change) and ‘conservative/traditional’ farmers (traditional - smaller farms with older farmers and a resistant to change).

That the identified farmer types match closely the expected types suggests that the role-strategies farmers follow are in close relationship with the characteristics of the farm/farmer. For example, farm-size either provides access/opportunity to play certain roles that may be restricted to others (for example, tree planting on larger owner-occupied farms) or forces farmers to perform particular roles for economic survival (e.g. diversification of small intensively farmed units). The question now is, to what degree have these role-strategies become internalised such that farmers see themselves as that particular type of farmer, e.g. “I am an entrepreneur/diversifier”? According to identity theory, once these identities become salient, future behaviour (where choice is available) is likely to be consistent with the role-strategy of the identity - thus a picture of how the Community Forest is likely to develop *in the future may be generated*.

7.4 Establishing group commitment and self-recognition - identity commitment and salience of clusters

To analyse the relationship between the cluster groups and identity it is necessary to investigate the relative salience of/commitment to the identities. Whereas for an attitude based approach to agricultural decision-making (e.g. Carr, 1988; Carr & Tait, 1990, 1991; Wilson, 1996) behaviour is seen to be related to the evaluation from ‘positive’ to ‘negative’ of an attitude (see Ajzen & Fishbein, 1975; Eagly & Chaiken, 1992 for comprehensive discussions on the attitude-behaviour link), the identity approach views behaviour as dependent on the position of an identity relative to other identities in the hierarchy. Thus the analysis of commitment and salience is conducted on the basis of the ranked importance of the identity (i.e. identity 1, identity 2, identity 3, identity 4) for each of the farmer groups.

7.4.1 Commitment to identity

Cluster Group	Ag.prod Identity	Agribus Identity	Conserv Identity	Diversf Identity	Kruskal-Wallis H score (d.f. = 3)
Agribus (n=10)	<u>19</u>	24	29	30	(H = 28.34: P < .001)
Diversf (n=18)	<u>23</u>	24	29	25	(H = 17.54: P < .001)
Conserv (n=15)	<u>20</u>	24	25	24	(H = 9.36: P = .025)
Ag.prod (n=17)	<u>21</u>	25	28	30	(H = 25.00: P < .001)

Table 7.6: Commitment of cluster groups to identity. Scores are the mean commitment scores for each group (not ranked data) with the underlined scores indicating highest identity commitment, and those indicating lowest identity commitment in **emboldened italics**. The relative distance between the scores for each identity group is meaningful as it reflects the degree of difference indicated on the measurement scales.

Table 7.6 shows the commitment that the cluster groups have indicated to the respective identities. In order to conduct the Kruskal-Wallis analysis in the manner shown above, an assumption was made that the four identities represent independent cases, i.e. that the farmer indicating commitment to agribusiness makes salient a different identity when indicating commitment to diversification, etc. Thus, for example, each farmer in the agribusiness group (n = 10) was divided into four cases 'agribusiness-agricultural producer', 'agribusiness-agribusiness', 'agribusiness-conservationist' and 'agribusiness-diversifier' and these identities were tested against each other for between group differences giving a total sample of (n = 40).

Immediately obvious is that all farmer groups show their highest commitments to the agricultural producer and agribusinessman identities (in that order). This result should be expected as, by definition, all 'farmers' are agricultural producers and are therefore largely committed to agricultural production as means of income generation, and, again because of the need to support the family, all farmers are committed to a businesslike approach to production. Failing to prioritise income needs risks considerable loss of self-esteem from both the farming community (Dalton, 1967; Coughenour, 1976) and the farm family. That commitment does not appear to vary at the sub-culture level suggests that farmers are committed to the roles of the more general farming culture first - i.e. the culture of 'the farmer' remains very strong despite pressure to become

entrepreneurs. The degree of commitment of all farmers to agricultural business is evident in that even farmers from the conservationist cluster showed higher commitment to agribusiness than to conservation. This suggests that farmers in the conservationist group consider agricultural and business commitments as more important than commitment to conservation⁴ - i.e., the potential loss in terms of self-esteem would be greater if they ceased an agriculturally based, business-like approach to farming than if they ceased performing conservation roles. Meeting commitments for economic security has been observed by Ilbery (1985) as an essential pre-requisite that must be met before social and personal factors become important.

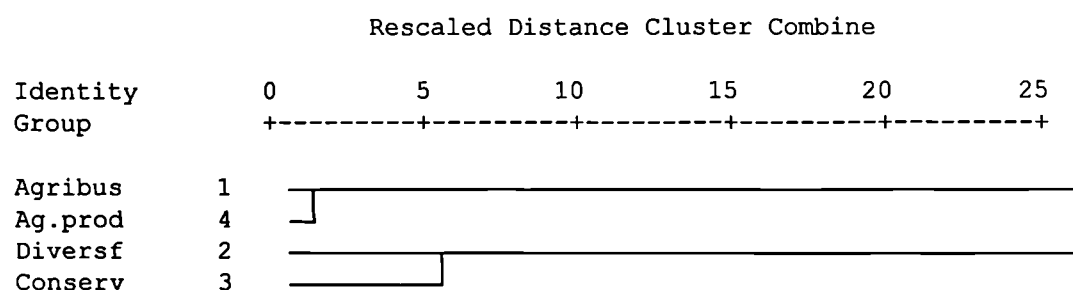


Figure 7.2: Cluster analysis of the mean commitment values for the four identity groups (see Table 7.6).

A cluster analysis of the group means was conducted (using Ward's method) to aid in describing the similarities between the group's commitment responses. The dendrogram Figure 7.2 suggests that the agribusiness and conservative agricultural producer groups - which both place an emphasis on maintaining agricultural production - show the greatest similarity, and that there is a considerable dissimilarity between these two groups and the groups with greater commitment to change.

7.4.2 Salience of identity

As with commitment, all farmer identity groups indicated that the most salient identity, i.e. the one that best describes themselves and is most important to their self-esteem,

⁴ During the administration of the questionnaire many farmers commented when evaluating the conservationist strategy of "Rely heavily on government conservation schemes to keep the farm profitable [Strongly approve - strongly disapprove]" that 'I don't think the family would like it if I did that'.

was that of an agricultural producer. For the commercial/agribusiness cluster and the conservative/traditional agricultural producer cluster the rank order of identities are identical. They see themselves first as agricultural producers, second as agribusinessmen, third as conservationists and lastly (by a considerable margin) as diversifiers/ entrepreneurs. Evidence to support this residual role for diversification can be found in the between group analysis of the principal component scores (Table 7.3) where the diversifier role-strategies proved unimportant to both clusters, particularly the conservative agricultural producers. The only major difference between the groups was that the range in mean scores from agricultural producer to diversifier is wider for conservative agricultural producers group - suggesting conservative agricultural producers are more opposed to diversification than agribusiness farmers.

Cluster Group	Ag.prod Identity	Agribus Identity	Conserv Identity	Diversf Identity	Kruskal-Wallis H score (d.f. = 3)
1 Agribus	<u>3</u>	8	9	14	(H = 20.04: P < .001)
2 Diversf	<u>4</u>	9	11	9	(H = 20.72: P < .001)
3 Conserv	<u>3</u>	8	5	7	(H = 14.87: P = .002)
4 Ag.prod	<u>2</u>	7	9	15	(H = 36.36: P < .001)

Table 7.7: Salience of identities for each cluster group. Scores are the mean salience scores for each group (not ranked data) with the underlined scores indicating the most salient identity, and those indicating the least salient identity in *emboldened italics*.

While this result was expected for the conservative agricultural producer cluster (Shucksmith, 1993: P469 suggests they are “most reluctant to undertake non-agricultural activities on their land”), typologies have suggested that the large agribusiness oriented farmers are the farming equivalent of ‘entrepreneurs’, or are at least readily prepared to undertake non-farming ventures on the farm if there is profit available (e.g. Shucksmith, 1993). This study suggests however, that the true ‘entrepreneurs’ in the Marston Vale are the smaller farmers who are forced into adopting an entrepreneurial strategy through an inability to farm their land more intensively. These farmers follow a diversification role-strategy (Table 7.3), show farmer/farm characteristics characteristic of farmers disengaging from agriculture (Tables 7.4 and 7.5) and are more likely to hold the diversifier/entrepreneur identity as salient than farmers in the other identity groups.

Evidence thus suggests that this group is acting consistently with the higher salience of the diversifier identity.

Perhaps the most important group from the perspective of the Community Forest is the conservationist farmer group. As this group is more likely than others to have undertaken a conservation scheme on the farm, ‘conservationist’ farmers may be the most amenable to Community Forest schemes in the future. Analysis of the salience scores shows an interesting result. Whereas farmers in this group show lowest commitment to conservation (i.e. they stand to lose relatively little in terms of social recognition if they ceased performing ‘conservationist’ roles), being a conservationist is very important to their own self-image and was considerably elevated in the identity hierarchy for the conservationist group relative to the other farmer clusters. The connection between this group and the existence of a conservation scheme on the farm suggests that this group above all others is motivated by non-business/farming oriented values, specifically their concerns for conservation. This apparent concern may also explain why the accumulative/agribusiness identity with its emphasis on resource exploitation has the lowest salience.

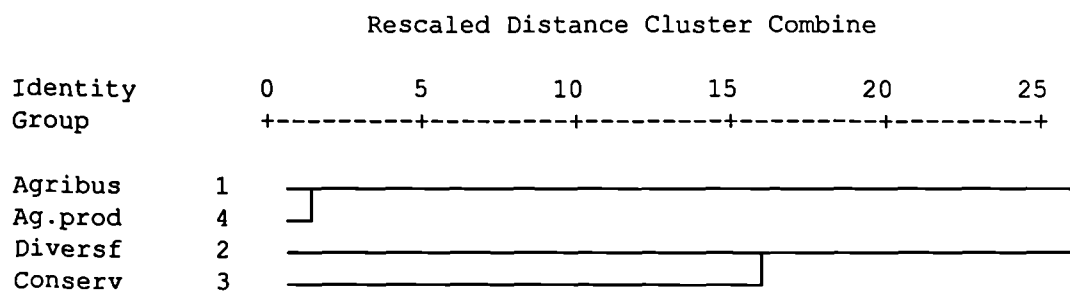


Figure 7.3: Cluster analysis of the mean salience values for the four identity groups (see Table 7.7).

The cluster analysis of the group means suggests that, while the pro-farming groups are closely linked, the degree of similarity between the conservationist and diversifier identities has decreased when compared with the commitment indices. In other words, while in terms of their commitments to farming the two groups are similar, the

differences between the groups become more apparent when looking at the way they view themselves as farmers. This may be because, while both groups are similarly committed to running the farm as a business, the ability of the ‘conservationist’ farmers to view themselves as conservationists clashes with the more business oriented strategy (see Table 7.2) - whereas there is no such conflict for diversifiers as the ‘agribusiness’ identity is held as salient as the ‘diversifier’ identity.

In general, the group based analysis provides support for a connection between self-identity and behaviour. Farmers belonging to the diversifier group had a higher salience of the diversifier/entrepreneur identity than more agriculturally oriented farmers and, in particular, farmers in the conservationist cluster held the conservationist identity as far more salient than the other farmer groups. They see themselves strongly as conservationists and their behaviour appears to reflect this perception. Farmers in the more agriculturally inclined commercial/agribusiness and conservative agricultural producer groups both held the agricultural producer identity as most salient, the agribusiness identity as second most important and the diversifier identity as least important. In terms of commitment, farmers from all four groups were committed to both the agriculture and agribusiness identities, with the lowest level of commitment to agricultural production shown by the diversifier farmers and the highest by the agribusiness group. That the diversifier and conservationist groups saw agribusiness commitments as more important than the diversifier and conservationist identities respectively may reflect that maintaining social commitments in farming primarily depends on maintaining the economic viability of the farm.

7.5 Implications for the Community Forest

When all the results of this chapter are taken into account, a number of conclusions can be drawn about the effect of farmer identity on the uptake of the Community Forest scheme. The accumulators/agribusiness group comprises, in general, younger farmers with large farm areas. Perhaps because of their larger farm-size this group has both the greater opportunity and intention to plant *larger areas* of woodland in the future than other farmers although they are no more likely to intend to plant trees on the whole.

Farmers in this group are strongly committed to agricultural production as a means of income generation and do not appear to identify themselves as diversifiers/entrepreneurs. The primary distinction between this group and the closely associated conservative agricultural producers is a greater willingness to change. For the Community Forest there may be opportunities in terms of encouraging woodland planting (providing the operation is commercially viable) as the greater willingness to change and larger farm area makes it both more acceptable and commercially viable to consider alternative crops. However, the strong and commercially oriented agricultural identity restricts the extent to which this group is likely to become involved in the provision of passive leisure facilities for the public.

The diversifier group consists of farmers with relatively small farms who need to farm intensively to maintain their agricultural income. Because of this inability to raise their agricultural incomes without increasing the farm size, farmers in this group tend to perform diversified roles more frequently and consequently hold the diversified farmer/entrepreneur identity more salient than farmers in other groups. Despite their diversified role-performances all farmers in this group (except one who was 99 percent diversified) were still primarily committed to agricultural production and consequently identified themselves as agricultural producers. The motivation behind intensive agriculture and diversification may be the stage of the life cycle as these farmers are relatively young and thus are trying to build up capital and the farm unit. In terms of their likely participation in the Community Forest, the intensive nature of the land-use and smaller areas of owned land (an average of 62 hectares compared to 122 hectares for farmers in the other groups) suggest there is very little scope for woodland planting. While the group is the most enthusiastic about diversification and adopting non-farming roles in general, they are also the most economically constrained. One interesting feature of this group was that they were not significantly more likely to have diversified than farmers not in the group, yet all other evidence suggests they were the most enthusiastic about diversification, e.g. being more likely to intend to diversify in the future. This suggests that operating a diversification scheme is not necessarily indicative of following a strategy of diversification - a point which should be observed in future studies of diversification activity, particularly where typologies are involved (also see Chapter

9.2). Analysis of the role-identity of the farmer produces a better indication of approach to diversification.

Farmers in the conservationist group are perhaps the best candidates for Community Forest projects on their farms. They own relatively large areas of farmland (and woodland) and are well established in the area - thus they are in a relatively unconstrained position as far as future woodland planting is concerned. In terms of their inclination to plant woodland, this group is strongly conservationist oriented and consequently their view of themselves as conservationist farmers is secondary only to their self-image as agricultural producers. As the diversifier identity is relatively salient compared to the more agriculturally inclined groups it also suggests a willingness to change the business approach away from agriculture - unlike the agricultural producer and agribusiness groups. That this group may be the best for targeting Community Forest resources is evidenced by the fact they are significantly more likely to have undertaken a subsidised (or unsubsidised but substantial) conservation scheme on the farm. These farmers are still committed to agricultural production but, as long as the commercial commitments to the farm are satisfied, are likely to pursue the environment oriented roles compatible with the conservationist identity and the Community Forest objectives.

Finally, the 'agricultural producer' group contains older and more established farmers. The conservative/traditional strategy they employ involves concentrating on agricultural production and an unwillingness to introduce changes to the farm structure (such as changes to hedgerows) - thus any change in line with the Community Forest policy seems unlikely. Decisions made about farm direction in the future are likely to be strongly oriented towards agricultural production and not towards either conservation or diversification. A number of farmers in this group (30%) have no successor to take over the farm and thus their farms may become available for Community Forest plantings. However, it is unlikely given their strongly agricultural self-identity, that farmers in this group would choose to plant the farm in trees as a retirement measure. Whilst this has happened in some of the Community Forests (Anon, 1994), this behaviour would be more in keeping with conservationist oriented farmers - all of whom have successors in the case of the Marston Vale.

7.6 Summary and conclusions

Results of the quantitative investigation appear to confirm the hypothesis that farmers in the Marston Vale have distinct farming identity sub-cultures within the umbrella of an overall 'farmer' identity. Whilst all farmers are concerned largely with their commitment to agricultural production and agribusiness, two groups of farmers - diversifiers and conservationists - have a higher salience of the diversifier and conservationist identities respectively and behavioural patterns which both reflect and are causative of this higher salience. In terms of the implications of farmer identity for the Community Forest, evidence suggests that the conservationist farmers are perhaps the most likely to adopt tree-planting schemes as they have the most positive attitude towards conservationist roles. This supposition is supported by the fact they are already more likely to have a subsidised conservation scheme on the farm. From an identity perspective the diversifier group may also be prepared to participate in Community Forest as there are fewer role-conflicts involved and the group shows the lowest attachment to agricultural production. However, the financial constraints this group is under (leading to intensive agricultural production), the lack of agricultural land, the stage of life cycle, and the high commitment to the agribusiness identity means that participation is unlikely for financial reasons. In contrast, 'agribusiness' farmers can afford the capital loss from woodland plantings but are strongly oriented towards commercial agricultural roles. The emphasis on commercial aspects of farming and greater enthusiasm for diversification than conservative agricultural producers suggests that, *if* (and only if) woodland planting becomes commercially viable, this group is well positioned to take advantage of the Community Forest scheme. Finally, conservative/traditional agricultural producers are the least likely to participate in the Community Forest scheme. Farmers in this group show strong commitment to agricultural production, identify themselves principally as agricultural producers, and appear to be unwilling to countenance major changes in farm structure. This group embraces the traditional image of the farmer.

The results of the quantitative investigation provide evidence supporting (a) the existence of a number of farmer identity sub-cultures within the Community Forest area, and (b) that farmers of these identity types are likely to respond differently to the Community Forest proposals. However, while it is important to establish the existence of these behaviourally defined sub-cultures within the general farming culture, the quantitative approach can do little to develop an understanding of how woodland establishment clashes with farmers' existing self-identity. For example; How does woodland serve as a symbol of group belonging within the overall farmer identity? Does this differ between the identity sub-cultures identified in the quantitative analysis? The following chapter deals with this issue by investigating farmers' "socio-cultural disinclination to plant woodland on productive ground" (Bullock *et al.*, 1994: P227). In particular, emphasis is placed on the status value of woodland as a crop in comparison to current cropping practices, and the nature of the 'farmers not foresters' mythology and how it relates to the establishment of farm woodland on agricultural soil.

Chapter 8: The conflict between current farmer identity and the establishment of woodland

8.1 Introduction

Cluster analysis of the role-behaviour data established that, within the farming community, there exist a number of different role-behaviour defined farmer ‘types’, ‘sub-cultures’ or ‘identity groups’. These groups label themselves according to these ‘identities’ and analysis comparing behavioural features of these groups with those expected from the literature (e.g. Shucksmith, 1993) suggested that behaviour is largely consistent with this self-labelling. However, it also emerged from the analysis that the ‘agricultural producer’ identity was the most salient amongst all farmers, even those who received less than 50% of their income from agriculture, and that this identity was closely linked with the ‘agribusiness’ identity. Thus, the general ‘productivist’ farming identity (or culture) still appears to dominate. Farmers are ‘farmers’ *first* - with the ‘diversifier’, ‘agribusiness’, and ‘conservationist’ identities still expressed largely at a ‘sub-culture’ or farmer ‘type’ level. This chapter is based on exploring the broader ‘farming’ identity, in particular examining how woodland planting/management may interfere with the established role performances required to obtain status as a ‘good farmer’ and satisfaction from farming - as well as the social value of woodland to the farmer. While it appears that the social value of woodland is similar across all farming sub-cultures, the chapter explores instances where farmers from different identity groups appear to view the role or significance of woodland in a different fashion.

The chapter is divided into four sections. The first two sections deal with (8.2) the existing symbols of farming identity and (8.3) the process of transferring status information. Section 8.4 then discusses the way in which farmers view themselves and their relationship to the land (e.g. stewardship and nurturing concepts). While these sections do not deal directly with woodland, it is essential to establish how agricultural producers identify themselves as farmers along with the beliefs and mythologies that

contribute to their self-perceptions as ‘farmers not foresters’. The issue of farm woodland establishment is raised in the third section (8.5), which reports on how farmers perceive establishing farm woodland on agricultural land may affect their status, self-esteem, satisfaction, and/or ability to perceive themselves as ‘farmers’. Although the chapter concentrates on the social value of woodland, because at least moderate economic success is required to maintain social status as a farmer (Coughenour, 1976), some consideration is also given to economic issues where relevant. The chapter is largely based on assessment of the secondary, in-depth interviews with farmers representing the four identity groups - brief biographies of whom are presented in Appendix v.

8.2 The social symbolic value of crops and livestock

As discussed in the conceptual chapter (Chapter 4), the symbolic interactionist perspective suggests that self-esteem is provided through evaluation of meaningful role-behaviours (significant symbols) that display commitment to the peer group. If the evaluation is positive, the individual’s commitment to that particular identity is enhanced - as is the salience of the identity (Stryker, 1987). In general, significant symbols that impart consistently positive evaluations will produce status within the group that recognises the meaning of the role-behaviour - and therefore positive self-esteem. These may be broadly termed ‘status symbols’ and reflect either skill within a particular role or commitment of economic or social resources to being a particular type of person (identity). In addition to obtaining status, the maintenance of self-esteem and therefore identity itself is dependent on the successful performance of these symbolically important behaviours.

A number of symbols have been suggested as important for the farming profession. Status and self-esteem are commonly reported as being obtained through the purchasing of new agricultural equipment or infrastructural improvements on the farm (Goldstein & Eichhorn, 1961; Rogers, 1983; Higgins & Seabrook, 1986; Seabrook & Higgins, 1988). In addition, Bell & Newby (1974) observe that most of the status attributed within the farming profession can be directly linked to the institution of property (e.g. farm size),

with a smaller proportion accounted for by the skill displayed in husbandry performance. It is important, however, when considering status as a farmer to separate 'class' status from 'farming' status, as the institution of property in Britain has implications for both. While the upper classes may obtain within-group status solely through the size of the landholding, for status within the farming community farm-size is relatively unimportant in comparison to the husbandry performance of the farmer - although significance of symbols may vary depending on the sub-culture peer group (e.g. Dalton, 1967; Gasson, 1974; Coughenour, 1976). For example, work by Gasson (1973) suggested that producing the best quality crops and livestock was considered to be the most important factor in defining a 'good farmer' and *Schroeder et al.* (1985) found the appearance of crops an extremely important factor in obtaining status among the farming community. This central emphasis on nurturing ability and crop quality was also reflected in the Marston Vale study.

When asked to describe the features of a 'good farmer' emphasis was strongly placed on the quality of the crops produced, with many farmers suggesting that nurturing ability represents the distinguishing feature between a 'good farmer' and a 'bad farmer'. The phraseology of farmer 6 - "it's the be-all and end-all in farming" - sums up the general feeling in the farming community of the importance of crop quality. This is easily understood in the context of what the crop (or animal) symbolises - the culmination of myriad farming skills such as the ability to operate machinery, selection of crop species and judgement of appropriate times for spraying and fertilising (Coughenour, 1976: P81). In addition, its high visibility from the roadside makes the process of communicating ability as a farmer a relatively simple task. This section explores the role of crops as a symbol of farming ability within the Marston Vale, and concludes by presenting a model of status acquisition showing the central importance of crops.

There are two criteria on which farmers judge a crop; (1) physical appearance or attractiveness, and (2) crop yield per acre¹ (or weight/quality per animal).

¹ No farmer in the survey referred to yield per hectare as a status symbol - 'acre' is the accepted measure.

8.2.1 Physical appearance of the crop

Judgement of the physical appearance of the crop is a comparative exercise centring around its uniformity within a field, between fields, and between farms. As the process is dependent on appraisal from a distance, the signs farmers observe are usually visual, such as the consistency of colour, regularity of crop height and regularity of crop density, each of which may be indicative of a variety of poor husbandry skills. An irregular crop density or 'crop lines' may indicate problems with the drilling of the crop - for example, farmer 23 observes that farmer 8 "made a mistake with his drilling. One of his things was blocked up and so *was his nice lines*." Irregularities in the height or colour of the crop may be attributed to other aspects of farming such as creating clay pans through using heavy machinery in wet weather (farmers 6 and 27) or incorrectly applying herbicides or fertiliser - for example, farmer 37 notes that he has "strips in the middle of the field where the fertiliser hasn't been calibrated or the spreader's not working properly and there's twice as much on one bit as another" and farmer 40, "I accidentally double dosed one strip up the field and the linseed .. I haven't killed it, but it's not flowering. Look - you can see the exact part." A particular concern for farmers that emerged from the investigation into 'roadside farming' (see section 8.3) is that the crop is '*clean*' - i.e. lacks or shows a low level of weed incidence - rather than '*dirty*'. While the reason for this emphasis is not clear, it may be connected with the obvious height and colour differences of weed species. In addition, whereas other problems may be attributable to soil and weather conditions, all weed species are now controllable through herbicides and therefore the issue is solely one of husbandry.

The obvious failure of an entire field of crops may either reflect a larger scale of the practices that lead to patchiness of fields or problems related to the selection of inappropriate species or a misreading of the climatic and soil conditions. For example, farmer 40 had a poorish crop of barley "in one field" in 1995 because there was not sufficient rain to allow the crop to germinate and, as he observes, "farmers notice that." In the worst case scenario crops over the entire farm may be poor because of poor husbandry practices. Farmers make some allowances for climatic conditions, which are generally distinct from single farm occurrences as a number of farmers in an area will have similar problems. However, where a single farm has distinctly poorer crops than

neighbouring farms, it may be concluded - according to farmer 57 - that the farmer is "someone who'd rather be down the pub at dinner time or in the house watching the cricket rather than being out there tending to a job that needs doing." In other words, where there are large areas of unattractive crops the farmer's husbandry skills are perceived as poor - and, as farmer 27 states, "there's no excuse for that."

8.2.2 Crop yield per acre

As with the appearance of the crop, 'yield' as a symbol of farming ability incorporates a number of other farming skills that must be present to produce high yields, for example, "using the correct seed rates, accurate plant spacing, appropriate pest control measures and the right level of fertiliser use" (Seabrook & Higgins, 1988: P103). Thus, increased yield represents another central symbol of nurturing or custodial ability, conveying social status as well as providing a considerable boost for self-esteem as a measure of improvement in farming skill. Sometimes this can be over and above any financial advantage of high yield, as the following statements from farmers 11 and 23 suggest:

"It's not necessarily a matter of income - it's a matter of personal pride. The ability to go down to the pub, buy a round, and shout about your crop. It's a way of telling yourself you're getting better." (farmer 11 'diversifier')

[asked what farmers brag about] "The size of their crop - You know, 'I grew 4 ton of this and I only spent 30 quid an acre'. That .. everyone exaggerates in the pub - you know, you've got your pub yield, and then you've got the yield that the accountant knows about. And they're usually a bit different." (farmer 23 'diversifier')

Farmers, particularly younger commercially oriented farmers (as above), see the increased production of agricultural commodities as important in distinguishing between 'good' and 'bad' farming practices and, consequently, 'increasing yield' commonly provides the core of any definition of a 'good farmer'. A 'good farmer' has been variously defined in this context as "the chap who can up his output by a ton an acre or whatever - and continue to do so" (farmer 37 'diversified'), a farmer who is "always looking to produce more per acre than already produced. It's the aim of everyone ... at least it should be if you're a proper farmer" (farmer 20 'traditional'), and who "tries to

get three heads of corn where there used to be two or three blades of grass where there used to be two” (farmer 10 ‘agribusiness’).

Lacking from any definition of a ‘good farmer’ was the suggestion that a ‘good farmer’ may be measured in terms of the profits realised from the farm. This coincides with the widely acknowledged position that farmers’ goals are primarily intrinsically rather than instrumentally oriented (e.g. Gasson, 1973; Ilbery, 1983, 1985), but leaves the question of: why does crop yield serve as a better measure of a ‘good farmer’ than the ‘economic growth’ criteria that provides the measure of business performance for the non-farming commercial sector? The answer may lie in the subsidised nature of the agriculture industry. Whereas non-agricultural industry is free to set its own profit levels, with farming “the price is the price” - as ‘agribusinessman’ farmer 38 asserts - thus the element of skill involved in maximising returns from a product is absent. Returns for a crop of a set yield one year may provide substantially lower financial reward the next, then half again in the following year, and so on. Thus net income is dependent on both the farmer’s husbandry ability and forces outside of his/her immediate control. However, ‘yield’ itself measures only the husbandry ability of the farmer and therefore represents a better indicator of a ‘good’ farmer than any economic indicator.

Farmers may also use the appearance or general ‘tidiness’ of the farm itself as an indicator of nurturing ability and in one case (farmer 56 ‘traditional’) a proxy for yield itself. When asked why farmers are concerned about the tidiness of their farms, he suggests:

“You can’t tell at the end of the day by how much he gets off his land. But, if you look at the farmyard and you look at the way he *prepares and looks after the things* there, surely it’s going to be the same in his fields.” (farmer 56 ‘traditional’)

This connection between a tidy farm and nurturing ability was also expressed by farmers 8 ‘conservationist’ and 11 ‘diversifier’. Condition of the farm buildings, fences and other aspects of farm infrastructure may act as an indicator of a ‘good farmer’ because, when income is scarce, the maintenance of the farm buildings is likely to be one of the first areas where money can be saved. Thus a ‘poor farmer’ may see a deterioration in the appearance of the farm in times of economic hardship. For example, farmer 8

‘conservationist’ explains “Because we’ve been in a reasonably profitable mode for a number of years we can spend a bit on tidying up. But a few years back we couldn’t have done and we didn’t.” Equally, however, it may simply be that the features farmers appreciate in crops are extended to the features of the farm itself, i.e. it represents a particular aesthetic perspective developed through being raised in an agricultural community.

8.2.3 A general model of status within the Marston Vale

Figure 8.1 shows the central role of crop appearance and yield as the culmination of the farming skills displayed by the farmer (e.g. ploughing ability, seed selection) and increased economic commitment to the farming role (e.g. new machinery, additional land, fertilisers). The ‘business management’ and ‘farm husbandry’ feedback loops represent the re-investment in ‘farming roles’ permitted through following good farming practices and thereby obtaining high yields and high profits. While ‘good looking’ and high yielding crops, are essential to gaining status as a ‘farmer’ within the farming community, the other symbols - in particular, farm-size and new machinery/buildings (e.g. Bell & Newby, 1974; Saunders *et al.*, 1978; Goldstein & Eichhorn, 1961; Rogers, 1983; Seabrook & Higgins, 1988) - are also regarded as status enhancing. In this case, however, display is considered more ostentatious and, unlike good-looking crops, may or may not meet with approval depending on the identity of the peer group.

Money that is not re-invested in the farm does not increase status as a ‘farmer’ although it may support other identities. Therefore, higher profits are not in themselves indicative of commitment to agriculture and provide status only among the minority of farmers who are in farming strictly as a business (Dalton, 1967). For small-scale or ‘hobby’ farmers, status enhancement may be achieved simply through performing the farming roles themselves and the subsequent immersion in the farming culture (Schroeder *et al.*, 1985; Coughenour, 1995), i.e. becoming ‘established’ in an area. It is important to note in this diagram that woodland is attributed a largely peripheral role in the cycle of increasing commitment to agriculture as it simply provides for leisure activities and increasing the attractiveness of the farm.

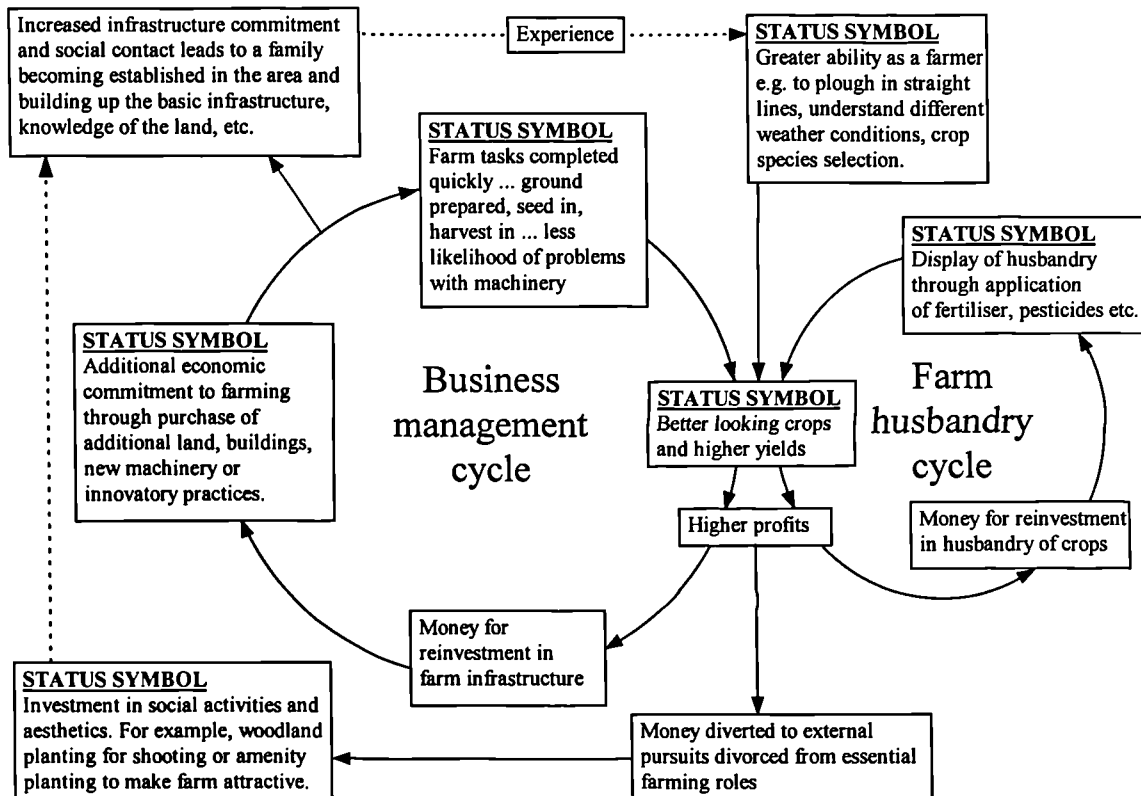


Figure 8.1: Allocation of status - the central role of crop appearance and yield within a cycle of increasing commitment to agriculture.

For 'conservationist' farmers therefore - where status may be obtained from woodland - this is unlikely to emerge from the farming community but rather, from another identity group - for example, the spouse in the case of farmers 8 and 44. A possible role for woodland in the commitment cycle as a 'crop' is discussed in Section 8.5.

8.3 Transferring status information - the practice of 'hedgerow farming'

The question now becomes, how is social information about the condition of crops/livestock transferred within the farming community? While both Bell & Newby (1974) and Coughenour (1976) suggest that the judgement of farming performance as a means of status obtainment is often through institutionalised means such as agricultural shows and farm walks, results from the Marston Vale study suggest that the process of judging farming performance is largely an informal one. In particular, while it has been

noted by other researchers that farmers observe symbols of farming status from the roadside (Seabrook & Higgins, 1988), its importance as a means of information transfer - both of economic and social value - has been considerably underestimated. Some farmers interviewed in the survey suggested that this process of information transfer is so important that “*any farmer worth his salt* or who’s at all interested in what he’s doing will [look over hedges]” (farmer 11 ‘diversifier’) or, as farmer 27 ‘traditional’ suggests, “*any proper farmer* [looks over hedges] because he’s interested in what other people are doing.” Farmers, in fact, have a term for the process: ‘hedgerow’ or ‘roadside’ farming - which involves driving slowly through the countryside and observing the condition of other farmers’ crops and/or livestock through gaps in the hedgerows. The development of this practice - which may have been facilitated through the decreasing cost of private transport since the 1960s (reducing the importance of institutions as observed by Bell & Newby, 1974) - has clearly resulted in roadside fields adopting a social symbolic significance disproportionate to the remainder of the farm. Consequently, the process of ‘roadside farming’ was, without exception, acknowledged by farmers in the qualitative survey as influencing management decisions on the farm.

8.3.1 Social significance of ‘roadside farming’

The social significance of roadside farming is that it enables farmers to display symbols of their farming ability, in particular their husbandry skills with respect to the appearance of their crops, but also lesser symbols such as recent purchases of agricultural equipment and their position as a ‘leading farmer’ in the adoption of innovations². Although the importance of displaying signs of farming ability is unquestionable, there was clearly a degree of reluctance in admitting to the practice. This phenomenon has been observed by previous researchers. For example, Rogers (1983) notes with respect to innovation diffusion that respondents’ general reluctance to admit to status motivations has frequently resulted in the underestimate of their importance in the past. Admission of such superficial symbolic behaviour may be difficult because of farmers’ broader self-image as independent operators, who are consequently not influenced by neighbouring farmers’ opinions or behaviours (e.g. Carr, 1988). It is widely regarded as something that *other* farmers do. Two of the farmers

² Patrick & Kliebenstein, 1980: P18, observe that “keeping up with the best farmers” can be an important goal for farmers.

interviewed (11 'diversifier' and 40 'diversifier') further theorised that the condition of roadside fields relative to the remainder of the farm is not something farmers hold as salient in decision-making, but rather a sub-conscious concern that is "always in the back of your mind. You think - if you've got a bad crop people will notice it and talk about it." (farmer 40)

Farming practices connected with 'roadside farming' were suggested as *centring around* the removal of weed species (particularly wild-oats) from roadside fields, and the trimming or otherwise tidying up of roadside hedges. Some typical examples of farmers relating their experience with 'roadside farming' follow:

"The field at the front I probably sprayed for wild oats this year when it was just about worth it. But that's because we got a wedding on and everyone was coming up the drive. And my crop man said 'Well, you ought to spray because we ought to make it look nice' So we did do a 20 acre field. On a normal time we may not have done it. It was just to neaten that particular field up." (farmer 8 'conservationist')

"Farmers are more likely to remove the oats from a field at the side of the road than fields away from it, even though there is no commercial justification for removing them. They use the excuse that it stops the seedbeds building up." (farmer 11 'diversifier')

"I think an awful lot of people still spend more money on roadside fields than they do fields out the back. They want every wild oat out the way - I think you do tend to take a bit more care. If you're going to cut the hedges nicely you do it by the road and .. you tend to think you want it done right when people are looking at it. And if there's a little corner field you just think .. "oh .. I won't worry too much about that one .. nahh" (farmer 23 'diversifier')

"Well, we get totally embarrassed when we have our disaster and it is on the roadside because sod's law says it probably will be. We were lucky. We had a disaster with peas which was about the farthest field from the road so we were really lucky." (farmer 27 'traditional')

"My father used to trim all his roadside hedges and let the others go to hell .. but I'm not that sort of farmer." (farmer 39 - 'conservationist')

For the observer 'roadside farming' where the displayed crops or livestock are in a poor condition can provide a substantial source of satisfaction with their own farming ability (satisfaction may be defined as emotional attachment to a job formulated by comparison with other possible outcomes - see Coughenour, 1995). As satisfaction leads to an increase in commitment to farming (Coughenour, 1976) and therefore, according to identity theory, an increased salience of the farming identity (e.g. Stryker, 1968; Stryker & Serpe, 1982), this practice is likely to play an important part in reinforcing the 'farmer' identity. The following examples are typical of farmer responses and emphasise that greater satisfaction is derived from observing poor husbandry in neighbouring farms than good husbandry practice:

"When we go on coach trips all these people sort of jump up and go 'Look at that crappy field over there .. all the weeds he's got! ... and you see this 100 acre field of wheat without a weed in it and people tend to look the other way.'" (farmer 23 'diversifier')

"Um - It's always nice to look at someone's fields that's worse than yours cause that makes you feel a bit better about yours." (farmer 27 'traditional')

"It's nice to be able to look over the hedge of somebody who's doing worse than you because you feel really self-satisfied ... I bet we get more pleasure at looking at a bad field of someone's than we get from looking at a good field." (farmer 37 'diversifier')

"Wherever it is, if I see a field of sheep I always have to slow down and look at them ... If their lambs look as good as mine or - you know. If they look better than mine we drive on and if they look worse than mine I feel quite pleased." (farmer 44 'conservationist')

"I think the most satisfaction I have of being a farmer is when I go by my fields to see them all look neat and tidy. And then go along the road and think "God, I couldn't live like that" when I see another farmer's yard with a lot of rubbish in it. And they call themselves the same as I call myself, a 'farmer'." (farmer 56 'traditional')

While farmers' observations of poorer crops confirm their own credentials as a 'farmer', it is in social interaction with other members of the farming community that these positions become established as 'fact'. The consequences of failing to maintain roadside

fields and crops in good condition are that the field or 'mistake' becomes the subject of ridicule within the farming community, with the ridicule deriving from an extremely strong sense of rivalry between farmers. Whether this is interpreted as 'good natured' or 'serious' depends to a large extent on the individual personality of the farmer, as responses ranged from denials that any criticism was implied to "Friendly??? No [emphasis] ... *Your next-door farmer is your enemy*" (farmer 45 'traditional'). In reality, the middle ground is likely to provide the most accurate assessment of the intent behind criticism of roadside fields, which was variously described as 'stupid rivalry', 'jibing', 'bitchiness', and 'gloating'. That the motivation is of a competitive nature is outlined in this extract from the interview with farmer 6 in which he describes 'competition' as the driving social process:

"You get satisfaction out of funny things like just drilling straight. You know - *it's a competition with all the other farmers* - who can drill the straightest and who starts the first and who finishes the first and who gets the best price and who buys their fertiliser at the cheapest price. There's all this banter going on all the way round and it's infectious in the end ... *cause you're always trying to get one over on the farmer next door.*"

As a consequence of the rivalry, farmers appear more than willing to report their roadside observations back to the farmer with the 'problem' on his/her fields. For example, farmer 40 'diversifier' reports that, following a mistake with sowing an inappropriate variety of linseed "no end of farmers" mentioned to him "You were the one that grew the wrong variety." The decrease in self-esteem generated through this admonishment process may provide farmers with an incentive to rectify the problem, as there is clearly considerable social reward to be gained through avoiding such mistakes in roadside fields. For, as farmer 6 'diversifier' notes, the response to criticism from neighbouring farmers over husbandry practices is usually "I'll flimmin' well make sure I don't do that again." Alternatively, the performance of the 'farming' husbandry role with competence and its display in roadside fields provide farmers with intrinsic gratification which includes "the sheer sense of efficacy in having done something with reasonable competence" (McCall & Simmons, 1978: P76). When this is approved of by valued associates considerable psychic reward is generated (Coughenour, 1976).

8.3.2 Economic significance of 'roadside farming'

The practice of roadside farming does not solely serve a social purpose, as it may also provide material benefits for the entire farming community through the transfer of valuable economic information. Farmers either use information from roadside farming as a means of maintaining equity with competitors, or, in the case of damage or disease in neighbouring crops or livestock, limiting the effects on their own farm and thus gaining a competitive advantage (this also serves to maintain social status). Maintenance of commercial equality through the process of 'roadside farming' takes two forms.

First, observation of farms from the roadside (or hillsides where the landscape undulates) can provide farmers with a cue for initiating their own management practices such as ploughing, drilling and harvesting. Farmer 56 (an older 'traditional' farmer) believes that the reason farmers operate this practice is that:

"Farmers are like sheep. If they see somebody doing something they think they should be there going to do the same job.... One sees one doing it. If somebody comes out with a combine and starts doing the corn you'll see before long that the next one next door will be out, even if it's not ready!"

This observation lends some credence to Wilson's (1992b, 1996) claim that farmers maintain a 'follow the leader' mentality. What is interesting from farmer 56's comments is that it appears that some degree of economic sacrifice (harvesting corn that is not ready) may be accepted in preference to allowing leading farmers a substantial head start; in other words, there is a social value to completing farm tasks rapidly. Another observation farmer 56 makes on this topic is that it is the larger commercial farmers who are more likely to participate in any competition to be the first to complete the harvest, which he suggests is simply a matter of 'show' or 'swank' - "They like to be first." Despite this observation, economic reasoning may also be involved as a gathered crop represents 'money in the bank' - whereas a crop in the fields is worth nothing until harvested. By retaining parity with competitors, farmers negate the possibility that they may be placed at an economic disadvantage to neighbouring commercial farmers who represent potential rivals for the most important fixed resource in farming - land.

Secondly, although it appears to have been largely neglected in innovation diffusion models (e.g. see Jones, 1975; Ilbery, 1985), 'roadside farming' provides farmers with an important source of information on new techniques, crop species and machinery. The nature and benefits of this approach appear to differ considerably depending on the characteristics of the farm/farmer involved. Three farmers classified as 'agribusiness' noted that they tend to look over the fence in order to "see if the neighbours have something that works" (farmer 30). This suggests that the practice may assist the more commercial farmers to maintain their competitive edge. However, it may be equally important for farmers with smaller farm sizes who cannot afford the land to experiment on new crops or production methods - as in the case of farmer 53 'traditional'. Finally, the process has substantial benefits for farmers who are newcomers to the farming profession. Both farmers 45 'traditional' and 57 'conservationist' who came from non-farming backgrounds commented that copying other farmers had provided their main source of information when learning the farming profession.

Information transfer is facilitated to an extent by commercial agricultural representatives who may use other local farmers' produce and the 'roadside farming' system as a means of demonstration. Thus, even where farmers are reluctant to divulge commercially sensitive information to competitors - as Bryant & Johnston (1993) suggest some farmers are - information on crop variety, fertilisers, pesticides and herbicides can generally be obtained from the supplier. Farmer 45 'traditional' explains the process as "You have a representative coming and you say - 'Right. So and so's got a certain crop or so-and-so's doing that' - and you get the information and it's yours."

With there being no substantial commercial benefit in concealing information from each other, it appears that the process of successful innovation has been allowed to develop as a source of social prestige. Gasson (1973) reports that being seen as progressive, up to date and experimental is an important symbol of being a 'good farmer'. This appears to be the case for farmers in the Marston Vale, particularly for the pro-change 'conservationist' and 'diversifier' identity groups (notably - but surprisingly - *not* farmers in the 'agribusiness' group). For example, two 'conservationist' farmers referred to the innovativeness of their families in installing new machinery that later became an industry standard - "the first big herringbone [milking shed] in Bedfordshire" (farmer

39), and one of the first electronic milking sheds (farmer 8). Satisfaction is also gained in dispensing information about husbandry techniques to friends and neighbours. For example, farmer 44 'conservationist' notes of his 'sheep recording group': "I think we all learn off one another. We try to be open with one another but keep it all within our group more or less." Similarly, arable farmer 11 'diversifier' is involved with a group of friends who "wander round each other's places" and ask questions such as "What is it?", 'When did you drill it?', 'How deep did you drill it?' and 'What did you put on it?' ... that sort of stuff". As there is no obvious economic advantage to be gained from sharing commercial information with competitors, it appears that this practice is largely of social value.

8.4 Farmers' stewardship mythology - links with self-identity

The visual appearance of the crop and crop yield, while important symbols of farming ability, are only symptoms of an underlying construct - namely, the nurturing and stewardship abilities of the farmer. Farmers' self-image as 'stewards of the countryside' is a well noted phenomenon (e.g. Carr & Tait, 1991; Gilg, 1991; McEachern, 1992; Body, 1993; Colman, 1994; Wilson, 1996; Duram, 1997) and appears, as suggested by McEachern (1992), to be at the centre of the farming culture. It has been suggested that the concept of countryside stewardship is largely a social construction of the farming role by farmers, directed at deflecting "negative images of farmers as exploiters of 'nature'" (Young *et al.*, 1995: P17), although others have argued that this stewardship ethos is genuine (Colman, 1994). Flinn & Johnston (1974: P196) observe that farmers view themselves as being closer to nature, and therefore the farming occupation as "a much more natural occupation than others." As 'nature' has been suggested as being "...one of the most powerful and enduring concepts in western thought" (Bell, 1992: P77), unique spiritual links with the natural world may generate a considerable sense of self-esteem for any group which can claim its purpose is to act as its agent. The current debate over whether farmers are 'stewards' or 'exploiters' therefore comes down to the question of the relationship between farmers and nature or, more specifically, whether the 'farmer' is inside or outside of the 'natural' world - part of the process or problem. In the Marston Vale there was a discernible undercurrent suggesting that the scope of

farmers' custodial beliefs goes beyond countryside management, and further that beneath many responses a 'nurturing myth' exists amongst members of the farming community, i.e. there is a spiritual connection between 'real farmers' and the ability to enhance life.

8.4.1 Farmers are born, not made

Flinn and Johnston in their 1974 study of agrarianism in Wisconsin farmers cite the "agrarian myth" as laid out in the Jeffersonian creed as suggesting: "Those who labour in the earth are the chosen people of God, if ever He has chosen people, whose breasts He has made His particular deposit for substantial and genuine virtue"³ (P190). This concept that farmers have been blessed as God's chosen people may be important in determining agricultural decision-making. Farmers' claim to be a 'part of nature' is, to a large part, connected with their beliefs that farming ability cannot be learnt, but rather is either inherent within a person or is not - a gift from a divine source - and ties in with the farming myth that the farmer is a 'creator', playing a god-like role within the countryside (Adams, 1996). This appeared in the interviews in a number of different 'farmer' philosophies, ranging from the common belief that certain people are born with the right aptitudes for farming to the belief that some people are imbued with the farming equivalent of 'green fingers' - a close spiritual connection with life itself - and others are not. Farmer 10 'agribusiness' typifies the more spiritual beliefs in relating the story of his two sons, one of whom was born with the ability to farm and the other without. Of his eldest son (now deceased) he records, "If he put anything in the ground it would die", which is in contrast with his younger son who, "could put anything in the ground and it would come up." It is interesting that here the factor determining the success of the crop is no longer a question of 'how' the crop was planted (i.e. husbandry methods), but rather 'who' planted the crop. A similar disparity between siblings was noted by farmers 11 and 15 - two members of the 'diversifier' cluster - although in these cases the connection with nature was a matter of how naturally perceptive the children were about the farming environment, rather than simple 'green fingeredness'. The position is outlined in the following statement by farmer 11 who defines the 'connection' with nature as having farming 'in the blood'.

³ No reference is provided for the Jeffersonian creed. Flinn & Johnston note that Jefferson appropriated the creed from a variety of works including Aristotle and Locke.

Farmer 11: I've got two little lads and they aren't very old yet but I can tell you now that one of them's got it in the blood and the other hasn't. One knows everything that goes on in here and he's only 5. But he'll tell you what we drilled and what that is in that field and what it is in the other one. The other one's three years older and would know that that was a tractor and that was a combine and that's green ... and that would be it. You know. It's like I say. It's in the blood or it isn't.

Interviewer: It's really that distinct, is it?

Farmer 11: I'm sure it is. I mean I know thinking back over the years I know some people who come from farming stock, who have completely gone away from it as it holds nothing for them. I can think of people who haven't come from farming stock who can do the job ... it's in their blood too obviously, even though its not necessary that they were born onto a farm.⁴

This 'farming blood' perspective on farming aptitude is not unique to British farmers, but has also been observed by Sachs (1973: P202) in German farmers where he notes that "sayings like 'One does not learn to be a farmer, it is in one's blood' ... frequently appeared in my recorded interviews." Sachs' interpretation of the perspective was that it implies the future farmer's involvement in the family-owned enterprise is such that he/she "grows to his professional role so that he has almost no option but to 'internalise' this role, i.e. to accept it as an element of his own self" (P202). In other words, that farmers recognise that becoming a 'real farmer' - using Sachs' phraseology - is dependent on a process of socialisation through the farm family and immersion in the farming culture. This is clearly not the case in the Marston Vale. As farmer 11 observes, where two sons are raised in the same farming environment, one may have farming 'in the blood' and the other not - thus precluding the possibility of a socialised role internalisation or, indeed, any hereditary explanation. In fact, results for this study suggest that having farming 'in the blood' generally refers to (a) a natural perceptiveness of the agricultural role and/or a 'green-fingered' ability, and (b) the natural ability to gain satisfaction from the performance of agricultural roles - even particularly mundane or mucky tasks.

⁴ Note that this conversation occurred at the beginning of the interview and was not initiated by the researcher.

The question of gaining satisfaction (and thereby self-esteem) from the performance of agricultural roles may be particularly important as concerns the motivation to continue in farming. Farming can be an 'unhappy' occupation due to farmers' social isolation and the frustrations associated with both the weather and the interference of the government and the public in the management of the farm. In addition, at times of agricultural crisis farmers are often under extreme financial pressure. Molnar (1985: P143) suggests that farming is a 'major exception' amongst occupations in that, while there is generally a good correlation between satisfaction with work and happiness, "farmers rank very low in their expressions of happiness, [but] they are amongst the highest in describing themselves as satisfied with their lives. They also ... have a particularly high satisfaction with their work" (also see Coughenour & Swanson, 1988). Similar to Molnar's observation that farmers are not necessarily happy, Flinn and Johnston (1974: P194) observe a common eulogy of a 'good farmer and his wife' as "they led a good, hard life", which, they state, gives a certain nobility to the difficulties faced as a farmer. Thus, having farming 'in the blood' may be the 'exceptional' ability to be relatively isolated and perform difficult, sometimes unpleasant, farm tasks, while at the same time deriving considerable satisfaction from the nurturing role - sufficient that it leads to a high motivation to continue as a 'farmer' rather than find a 'happier' occupation. As Coughenour (1976) suggests that satisfaction with performance of farming roles is likely to encourage farmers to increase their commitments to farming in the future, it may be surmised that as long as satisfaction with farming remains high 'true farmers' will remain farming.

The concept that the ability to be a 'real farmer' is somehow pre-ordained into certain individuals may be seen by other farmers in the community as representing a moral obligation to farm, particularly when combined (as was often the case with the older 'agricultural producer' farmers) with the belief that it is farmers' responsibility to 'feed the world'. A number of theories have been suggested to explain farmers' moral resistance to non-agricultural land-use. McEachern (1992) proposed that farmers' beliefs about the immorality of transferring land to non-agricultural production (not 'exploiting' it for farming purposes) emanated from the fact that many farmers have poor land and, thus, the moral obligation is to less fortunate members of the current farming community. Another perspective is presented by Williams *et al.* (1994) who

argue that farmers' reluctance to convert good agricultural land into woodland is 'morally wrong' on the basis that it represents a betrayal of the historical efforts of previous generations. Others (e.g. Bullock *et al.*, 1994) have suggested that the moral obligation felt is to the countryside itself, in the form of their perceived 'stewardship obligations' - although exactly who farmers claim to be stewards for is rarely (if ever) investigated.

Analysis of farmer responses in this study allows another hypothesis to be forwarded; that farmers' obligation stems from a belief that they have a moral duty to farm when it is 'in the blood' or preordained by 'god' or 'nature'. As morality has been suggested as a powerful behavioural motivator over and above other cognitive factors such as attitudes (Gorsuch & Ortberg, 1983), this raises important questions about the difficulties in generating enthusiasm for non-agricultural practices such as the Community Forest. Farmers' unwillingness to transfer land into non-agricultural (particularly 'permanent') uses has been noted by previous researchers (e.g. McEachern, 1992; Selby & Petajisto, 1995), as is farmers' preference to remain as principally agricultural producers rather than diversify (Shucksmith & Winter, 1990; Ilbery, 1992; Ilbery & Bowler, 1993). The importance of the morality of farming in determining land-use may be declining. While 'diversification' was opposed strongly by older farmers from the 'traditional' cluster, the acceptance of diversified roles by the younger 'diversifier' group suggests that this feeling of 'moral obligation' is decreasing in importance. However, even the 'diversifier' farmers still showed considerable reluctance to use agricultural land for non-agricultural purposes and the belief that farming is 'in the blood' was widespread across all the farmer types.

8.4.2 The farm as an identity

In addition to this new hypothesis, there was evidence to support Williams' *et al.* (1994) contention that the moral obligation experienced was directed towards the historical occupants of the farmland - although it was never expressed directly in this form. Rather, farmers displayed a tendency to refer to their farms as a dependant child, spouse or a member of the family; in other words, assign it an identity in its own right. With this status goes the moral obligation as a provider to care for the farm, 'love' it, and try

to understand it rather than deluge it with chemicals and exploit it for profit (an approach common to large agricultural management firms that is widely seen as not 'farming'). This concept is exemplified by farmer 40 'diversifier' in his assessment of what constitutes a 'good farmer'.

"I think one of the assets of being a good farmer ... you've got to have an *absolute love for the soil and animals*... Touch the old soil - understand about it. It means you should really keep your land in good order. We got to look after - *you got to treat it like a baby*. *You've got to keep it fed and keep the bottom clean* - which means good drainage. Yeah, it's a love of the land. That's what makes a good farmer."

Through recognising the farm as an identity in its own right farmers form a strong commitment to the farm itself, and consequently any developments not in keeping with the farm's best interests. Failure to maintain the family line or proceeding with developments out of keeping with the farm's perceived identity is clearly a break of trust - the commitment between the farm family and the farm itself - and may result in self-admonishment on the part of the farmer and, consequently, *loss of self-esteem*. This perspective was articulated directly by farmer 37 who likens selling the land for Community Forest developments to the betrayal of both himself and his farm. He states, "You hand your ground and you hand your life over and it's a little bit... [reflective pause] sometimes it strikes me as being a little bit like Judas money."

It is well documented that, in the investigation of farming cultures, it is extremely important to observe the farmer's relationship with the farm (Salamon, 1985; McEachern, 1992). However, research in this study suggests that this relationship may extend beyond the physical reliance of the farmer for the continuation of the family farm - retaining "*the name on the land*" (Marsden *et al.*, 1986: P273) or exercising a moral commitment to conserve the soil for the next generation (Walter, 1997) - to regarding the farm as a member of the family, such that it has an identity of its own. The question remains, however, of *why* farmers display such a strong commitment to their farms. One possibility is that the farm represents the accumulative 'role-play' of the family over a series of generations and therefore develops an identity that encompasses the commitments of previous and present generations to the continuation of agriculture. This possibility has also been observed by Selby & Petäjistö (1995: P79) who suggest,

“the field as an entity has been created, often in recent history... It has become an institution central to the dialectic between farmer and place.” The historical connection has also been observed by Dalby & Mackenzie (1997: P104) with respect to crofting. They note: “The power of crofting, or the croft, as a symbol, resides in the fact that it links family - labour and territory - with community, through deep historical association:”

The importance of the dialectic between the farmer and the farm may be enhanced by two processes associated with farmers’ relative isolation. First, external commitments are limited, allowing internal commitments to the farm and farm family to be strengthened. Thus, farmers may display greater commitment to a farm that has been farmed over a substantial number of generations than a relatively recent acquisition. Second, with the use of roadside fields to represent husbandry ability and thereby ‘farmer’ commitment to agriculture, the farm effectively becomes an extension of the farmer’s (or farm family’s) identity. Coughenour (1980) suggests that, because of the historic autonomy they have enjoyed, farmers can see themselves mirrored in their work activities and products, i.e. the control exercised over all stages of the production process enables the farm to become an extension of the farmer or farm family. Farm presentation may thus compensate for farmers leading a relatively solitary existence by acting as an expression of the farmer him/herself. Hence, as observed in farmers interviewed by Salamon (1985), the farm literally becomes a part of the farmer. The labelling of agricultural fields with names of significance to the farm family - observed as common practice in the Marston Vale - may also contribute to viewing the farm as an identity in its own right.

8.4.3 Defining a ‘farmer’

Perhaps the most important aspect of the stewardship mythology is that the natural ability to nurture crops has become part of the definition of ‘farmer’ and, particularly, the way this has led to the agriculturist’s definition of farmer differing from that of the policy maker. There are two meanings associated with people who farm recognised within the farming community, ‘farmer’ and the commonly used expression of ‘good farmer’ or ‘real farmer’. Perception of the term ‘farmer’ to the non-farming sections of

the public is akin to the dictionary definition such as that provided by the *Concise Oxford Dictionary* as “a person who cultivates a farm” (Allen, 1991: P424). However, to be recognised as a ‘farmer’ by the farming community requires the performance of a far more complex series of roles, to the extent that the identity has separated from the generic ‘farmer’ to represent a new identity type - the ‘good’ or ‘real’ farmer. Gasson’s (1973: P533) study of farmers’ goals and values found - in a limited response question - that of the attributes suggested the two most important for defining a ‘good farmer’ were producing the best crops or livestock (husbandry roles) and leaving the land in good condition (stewardship roles). In other words, to successfully farm an area of land (and therefore be regarded as a ‘good farmer’) requires not only that the land is cultivated, but that the cultivation practices are sustainable. Thus ‘the name on the land’ or ‘identity of the farm’ can be maintained through caring husbandry. To achieve this farmers must prove their nurturing ability over an extended period during which the land *must* be kept in good heart *and* the appropriate farming skills of producing attractive crops with high yields displayed. For example, farmers 39 ‘conservationist’ and 23 ‘diversified’, discussing the acceptance of farmers who are new to farming, suggest the criteria under which a ‘farmer’ will be accepted as a ‘real farmer’:

“When he can prove that he can farm properly. And, I mean, farming properly *doesn't mean growing all good crops. But that he can maintain his farm* and see that it's going to work for long-term and that he's going to be able to leave it in a good heart and - as we've said before. Because you should leave the countryside in good heart. *I can't see that you can say 'He's a farmer' until he's proved himself.*” (farmer 39)

“Nick R. in Salford - he was a North Sea oil diver. How long's he been here - I bet it's a lot longer than I think. probably 12-15 years or something like that. People still talk about him like ‘Oh, he's someone playing at it - he'll never know what he's talking about’ ... That's not to say he hasn't been accepted as a person but people still say - tell him to shut up because he doesn't know what he's talking about - and I think that will always happen.” (farmer 23)

There is some evidence that a farm may maintain its identity as a ‘real farm’ even when the farmer is not seen to be performing the roles adequately (and vice-versa). This point was raised by farmer 11 ‘diversifier’, who observes that, if a farm has been neglected

and has been looking “scruffy and run down” it may take an entire generation of ‘good farming’ before the family are perceived as being farmers. He adds,

“Up until that even with the most wonderful evidence, that farmer won’t be accepted - you know - it’s ever such a slow process - and the same goes the other way. If a farm’s been run well and, say, the next generation doesn’t happen to be that good at it, it takes a long time for the name to go down as well.”

Farmer 11 suggests the name of the ‘farm’ may maintain the status of a poor farmer over a considerable time period, even when the important visual signs of custodial ability are absent. This suggests there are circumstances under which Gasson’s (1973) criteria for defining a ‘good farmer’ do not function. Consequently, the picture of a ‘good farmer’ is made far more complicated through the influence of the reputation of the farm or farm family. Without the support from the farm’s reputation, any new entry into farming will clearly (from the comments of farmers 23 and 39) have difficulty in obtaining acceptance as a ‘good farmer’.

Various researchers have observed that one of the problems with the implementation of agricultural (particularly conservation) policies has been that there is frequently a difference in the cultural definition of terms used by the farming community and the policy makers (e.g. Carr, 1988; Young *et al.*, 1995). In the case of the Community Forest scheme, there has been an assumption made that ‘farmers’ will willingly shift production from arable/livestock production to woodland and leisure provision and that, in doing so, they will remain farmers as the idea is to maintain a farmed landscape (MVCF, 1995). This section (8.4.3) has established that the farming community’s definition of ‘farmer’ differs from that of the definition suggested in the Community Forest scheme which emphasises that woodland may be seen by farmers as just another crop. However, a farmer who regards him/herself as a ‘real farmer’ has certain additional commitments to the farm (as an identity) as well as a potential moral obligation to continue in the farming role. Further, it is not sufficient to regard oneself as a ‘real farmer’ - to obtain status the farmer must be *seen* by the community to be a ‘real farmer’. This requires the demonstration of custodial ability through the visual appearance of crops and ‘yield’ and, to a lesser extent, through related symbols that represent commitment to the farm such as agricultural machinery or buildings. The key

requirement now is to ascertain the position of woodland as a crop and, specifically, how woodland compares to arable crops and livestock as a symbol of farmers' nurturing ability.

8.5 Implications for the Community Forest scheme

The effect of deeply embedded cultural values on the adoption of agricultural innovations has been observed by Rogers (1983) as potentially having a considerable impact on diffusion rates. In particular, where an innovation is compatible with the existing cultural values adoption may be enhanced and, where the innovation is incompatible, adoption may be hindered. From the discussion on the social significance of crops and the influence of the nurturing myth, it is apparent that the farming culture centres around the production of crops and, particularly, the visual appearance of the crop and steadily increasing yields in the manner of the productivist model. In the past innovations in agriculture have centred around this objective, with adoption increasing either the productivity or quality of the crop (Rogers, 1983; Potter *et al.*, 1991) - a role which is in accordance with the 'farmer' self-identity. In this respect, there is some debate as to whether woodland planting can truly be regarded as an agricultural innovation. While Bishop (1992) states that the lack of a history of farm woodland planting means that farm woodland planting must be regarded as an innovation (and consequently may be examined using diffusion models), there is convincing evidence which suggests that it (and other extensification/conservation schemes) cannot be regarded as such because the practices are alien to the established farming culture. In particular, Pampel & van Es (1977) suggest that 'commercial innovations' and 'environmental innovations' constitute entirely different strategies, with the commercial innovations representing a strengthening of the farmer relationship with the market system, and environmental innovations the preservation of existing resources. They further note that "Farmers appear to be innovative either with respect to commercial practices or with respect to environmental practices, but not to both" (Pampel & van Es, 1977: P67).

While there is no doubt that woodland planting is an innovation of sorts, the pertinent question is: does the forestry role constitute a 'commercial innovation' along the lines of

a crop, or an 'environmental innovation' - which, evidence from the cluster analysis suggests, is likely to only appeal to the 'conservationist' farmers? An additional problem is that, even where the 'woodland manager role' is accepted as a 'commercial innovation', its management as a 'crop' may be entirely dissimilar to the nurturing of arable crops or livestock. Transferring the farm enterprise structure to innovations which are dissimilar to previous innovation types is likely to "*alter the relationships ... with other farmers*" (Coughenour, 1976: P83) and thereby reduce commitment to the general 'farmer' identity. Coughenour further suggests that this alteration in relationship for new innovations is because, "comparison groups are relatively rare, relevant norms and values poorly established, sources of interpersonal information are less readily available, and the structures for providing prestige, social approval, and for socialising ... thereby less effective" (P89-90). Rogers (1983) similarly observes that every innovation is judged to some extent on the basis of status conferral which acts, he surmises, as a powerful motivator for innovation adoption or rejection.

All available research suggests that farmers are not interested in new woodland planting as an innovation - other than amenity plantings in line with pre-existing farm structure development plans (e.g. Gasson & Hill, 1990; Bishop, 1990, 1992; Williams *et al.*, 1994). While farmers may well feel a moral obligation to maintain existing woodlands in line with their ethos as managers of nature (Bullock *et al.*, 1994), undertaking the 'immoral' act of transferring agricultural land to non-agricultural production and consequently risking loss of status and self-esteem as a farmer is not worth the current financial returns offered by forestry. This does not appear to be simply a problem of awareness of the available support. For example, Scambler (1989: P48-49) noted that "despite a high level of awareness of grants and advisory services ... even on those farms where the economics of forestry compare more favourably with those of sheep farming, no farmer expressed more than a slight interest in forestry," which she interprets as suggesting that farmers' attitudes to woodland have a substantial "tradition-bound component" (also see Bishop, 1990).

This section addresses the issue of whether Scambler's observed 'tradition-bound' resistance is due to the interference of woodland with the other, more traditional symbols of farming ability and the economic and social roles they play in maintaining

cohesion in the farming community. Marston Vale farmers have suggested that the visible condition of crops is the most important means of distinguishing between a 'good' and 'bad' farmer, as it reflects the quality of a farmer's husbandry skills. There is no historical precedent - at least within the last 50 years - for farmers regarding woodland as a crop and, in many ways, forestry bears little resemblance to cropping. Community Forest proposals encourage farmers to treat trees as a crop - for example, in developing agroforestry, energy forestry, Christmas trees or traditional coppice (Countryside Commission, 1993) - and appear to be based on the assumption that farmers will easily be able to translate 'woodland' to a 'crop' as both may be grown on arable ground and provide income through harvesting. However, while policy makers may value woodland as a crop, there is no guarantee that this is a definition shared by the farming community.

Cary (1993: P557) provides a number of alternate symbolic meanings for a 'tree' that are specific to various identity groups:

"A tree, signified as cedar on a flag, symbolises Lebanese patriotism. For a forester, a tree connotes utilitarian functions of wood harvesting; for an 'environmentalist', a rain-forest tree symbolises societal threats to forest ecosystems." (Cary, 1993: P557).

The relevant issue in the case of the Marston Vale Community Forest is what trees and forests represent symbolically to farmers. This issue is explored in the following section with particular emphasis on comparing the symbolic value of arable or pasture land to that of woodland, and on investigating how woodland planting may affect farmers' ability to display significant symbols of their identity as a 'good farmer'. While the section concentrates on the social significance of woodland, it begins by providing an account of farmers' economic concerns with woodland planting. For, in terms of a hierarchy of needs, it is possible to live without community approval, but not without running the farm at a profit. Thus commercial success serves a significant social function in maintaining commitments to the farm and, as Coughenour (1976, P85) states "...the farmer who fails to make farming economically profitable eventually loses social approval (prestige) and self-approval also."

8.5.1 The economics of woodland

As with numerous other studies (e.g. Scambler, 1989; Gasson & Hill, 1990; Bishop, 1990; Williams *et al.*, 1994), the majority of farmers in the Marston Vale expressed the belief that commercial woodland is not an economically viable option. When asked to give reasons for believing farmers would or would not consider forestry as a venture, thirty three (55%) - across all four identity types - expressed the opinion that planting commercial woodland would have a negative impact on farm income and/or the overall value of the farm.⁵ There was some indication that farmers' individual economic situations may have affected their response. While there was no relationship between presence/absence of debt or borrowing and the belief that woodland was uneconomic, farmers who have been unable to reduce debt levels were more likely to express concern that woodland is uneconomic ($\chi^2 = 5.43$, d.f. = 2, $P = .066$) - although the result was only significant at the 93% level. This suggests that farmers who are having difficulties repaying debt may be more likely to consider woodland an uneconomically viable option.

The most important commercial concern about woodland is that returns from forestry - with or without current subsidy - are insufficient to compensate for loss of income from arable crops/livestock. While farmers from all groups expressed this concern, opposition was strongest among the more commercially oriented farmers - often despite any personal opinions on the desirability of woodland for recreational purposes. For example, farmer 30 (an enthusiastic game-shooter from the 'agribusiness' cluster) states "I'd love to own a woodland - but I'll be buggered if I'll lose my income for it." Similarly, farmer 25, a 'diversifier' with a large tenanted farm who has planted recreational shooting spinneys on the farm, states "personally I would never give up a field with arable crops to trees, mainly because it is unprofitable." Another 'agribusiness' farmer (10) argued that, as the profit margin on woodland is only 4% "why go to all the risk when you can get that from a building society and sit back and smoke cigars in comfort?" While commercial farmers may be expected to reject woodland on the basis of low profit margins, a more interesting finding was that the

⁵ Note that, responses to this question were recorded using an open rather than closed format question. Thus the response indicates the issue of economics is particularly salient in farmers' minds and the estimate of proportion a conservative one. Closed format questions can overestimate the importance of an item by forcing the respondent to consider unimportant options (Fife-Schaw, 1995; Oppenheim, 1996).

only farmer who had investigated the possibility of forestry as proposed by the Community Forest team (52 - a 'conservationist') "in great detail" rejected the innovation on the grounds that "harvesting costs came to as much money as you were getting." Thus, even without considering the higher returns from arable crops, woodland was deemed to be commercially unviable on a small scale.

Although grant levels have appeared in previous studies to be important in the non-adoption of the FWS and FWPS schemes (e.g. Gasson & Hill, 1990; MVCF, 1992), this did not emerge as a major factor in the Marston Vale study. The differences may have resulted from question format as, whereas in the Marston Vale study an open format was used, both of the studies mentioned above assessed 'grant level' using a closed format question - thus potentially increasing the level of concern expressed. In the Marston Vale study, grant level was not a concern simply because farmers' cognition of 'woodland' does not extend as far as gauging the desirability of woodland planting on an economic basis - other issues are more salient. Evidence to support this may be found in surveys by Potter & Gasson (1988) and Bishop (1990) who report that 61% and 84% of respondents respectively were unwilling to even provide a financial bid for the establishment of woodland on agricultural land. 'Economic' factors may simply provide farmers with the easiest means of explaining their resistance to woodland, particularly if complex issues of identity and status are involved. This possibility gains support from the fact that farmers are unlikely to have any understanding of the economics involved in woodland planting. An anonymous reporter for the *Farmers Weekly* concluded from an extensive literature review of publications on farm woodland management and economics that "very few had any up-to-date, hard economic information of value to farmers. Information on labour inputs was particularly scarce" (*Farmers Weekly*, 1996: P50).

Some farmers expressed concerns about how the permanency of woodland may influence their returns in an agricultural environment where maintaining flexibility is an important aspect of farm management. A number of farmers observed that, whereas adjustments in subsidies and prices for agricultural produce are easily made in the following season, woodland does not allow this level of flexibility. The response of the farming community to this issue is discussed by 'conservationist' farmers 54 and 58:

“Things change rapidly these days and you’ve got to be able to react. For example, if the payment goes on oilseed rape then you can simply change the crop. But, if an area is planted in trees, well they’re there aren’t they.” (farmer 54)

“In the farming community there is no sympathy for tree growing ... a farmer can lose money growing wheat and he will hope to get the money back next year. This is not the case with trees.” (farmer 58)

In particular, farmers were concerned that the government (with which farmers have a long-standing mistrust - Morgan & Munton, 1971; Bryant & Johnston, 1993) are prone to changing the rules leaving farmers with decreased grant payments or an inability to harvest the commercial crop. The introduction of environmental protection schemes such as SSSIs has shown that governments are willing and able to protect landscape features such as woodlands without compensating the farming community. In addition, one farmer (27) expressed concern that the grants are fixed and are neither indexed to the price of cereals nor maintained relative to inflation - thus “you might be looking at peanuts in 5 years time or in ten years.”

The other major issue to emerge was the problem of cash flow. In particular, two ‘diversifier’ farmers (22 and 1) were concerned that farmers would need to coppice or harvest woodland on a rotational basis in order to maintain a reliable cash flow, thus requiring the establishment of a number of woodland blocks at various stages of growth. The two perceived problems with this were a) the area of land required and b) the necessity of the grant scheme guaranteeing income over the establishment period for all blocks - possibly 80 or more years. When combined with the perceived high cost of maintaining woodland for the first 20 years (described by farmer 27 as ‘horrendous’), the lack of income immediately following the 15 years of FWPS payments, and an uncertain market for the final produce, cash flow issues may present a strong disincentive to woodland planting. Even where a wood burning power station has been established to provide returns on an annual basis, profitability will still depend on the industry remaining in business and accepting all the biomass farmers produce. Any

failure to meet these criteria could result in the farmer being left with an unwanted crop and no income in the short term.

8.5.2 The ‘tidiness of woodland’

As appearances of crops and livestock and the maintenance of a neat and tidy agricultural landscape are vital for judging farmers’ nurturing ability (and thereby support for their claim to being a ‘good farmer’), it is not surprising that one of the most crucial differences between woodland and arable crops is its visual appearance. Woodland does not provide farmers with the sense of satisfaction that they may obtain from arable crops, and this must in large part be attributed to the appearance. For example, farmer 6 observes, “There isn’t much pleasure in it [woodland] for farmers ... it just doesn’t look nice.” Farmers are unable to display the degree of control over woodland that they can exert over agricultural crops or livestock. - i.e. maintain a weed free environment, straight lines, and even density and height of crop. In other words, woodland limits farmers’ ability to display the husbandry skills that form the core of their system of social recognition and therefore self-identity.

There does, however, appear to be a difference between the clustered ‘identity’ groups - particularly ‘conservationist’ and ‘agribusiness’ farmers - in the perception of the desirability of woodland. ‘Conservationist’ farmers, in addition to being more likely to have established a conservation scheme on the farm, also appear to prefer management strategies that differ from the priorities of other more production oriented identity groups. This may affect their position as a ‘good farmer’ within the farming community. For example, whereas farmer 57 ‘conservationist’ states that he only manages his hedges by trimming them lightly in order to encourage wildlife, in general, farmers prefer to trim hedges back in order to minimise shading of the crop as well as spraying any weeds at the base of the hedges. Another ‘conservationist’ farmer (44) refers to how his visual appreciation of the ‘butterfly conservation area’ he planted differs to that of his peer group:

“Some people [farmers] say I should go round and strip off all the bottom branches so they’re nice and straight like beanpoles. But I’d far rather let them grow naturally with the branches bending down to the ground.”

While not all farmers grouped into the ‘conservationist’ cluster would be in complete agreement with these management practices, it is most unlikely that a farmer from the ‘agribusiness’ cluster would manage woodland or hedges in this fashion, and he/she may even express opposition. For example, farmer 10 ‘agribusiness’ refers to farmer 57’s farm as a ‘circus’ because of his more natural approach to farming, and suggests his brother (farmer 9 - also a ‘conservationist’) who has allowed natural woodland regeneration on one ‘wet’ piece of land “Ought not have been a farmer.” It is the ‘natural’ - more widely termed ‘messy’ - appearance of woodland when left unmanaged that is of greatest concern to the more production orientated farmers. For example, farmer 38 ‘agribusiness’ owns a substantial area of woodland (15 hectares) recently declared an SSSI. Prior to the SSSI the woodland had been used for firewood coppicing in the off season, with the tops gathered together and burnt . However, this practice was stopped by English Nature in favour of leaving the tops on the ground. Both farmer 38 and a neighbouring farmer and friend (11) ‘diversifier’ preferred the previous management approach of clearing and burning. Farmer 11 notes:

“I thought it looked particularly nice afterwards. *It was a tidy, pleasant looking thing.* As it is it now looks like *a sort of jumble.* Um .. and, it probably is quite good for habitat but it’s a nightmare because you leave all this top wood lying round and everything grows through it. You can’t get through it with a machete.”

Farmer 10 ‘agribusiness’ made a similar observation in commenting on the difference between English woodland management and continental management.

“The Black Forest in Germany - That’s [emphasis] a forest ... it’s *maintained and looks beautiful.* If you drive through it it’s all kept as it should, whereas, our English woods have been allowed to *fall down, tumble down.*”

The farmer’s image of an attractive forest or woodland is almost invariably along these tidy lines - in the same way that the attractiveness of a crop or farm is determined by its neat and tidy appearance. While there is no single definition of what a Community Forest woodland should appear like (as the concept suggests a mosaic of woodland types), the emphasis of the forest on public access, leisure and conservation suggests

that the regimented 'trimmed' forest that would appeal to the farming community falls on the limits of what is envisaged as 'Community Forestry' as it may be both visually unappealing to the urban public and is likely to be low on conservation value. Farmers' awareness of a difference in the definition of what the Community Forest should look like has been raised through the development of "Berry Farm" (farmer label) or "Berry Wood" (Council/Community Forest label) near Wootton; twenty five hectares of recently planted woodland and meadows owned by the Bedford Borough Council (see *Common Tree*, Summer 1995). While "Berry Farm" is not a Community Forest 'show farm', its high visibility from the A421 (the main access road through the Vale) and its position as the only farm entirely given over to Community Forestry has led farmers to view it as such. Subsequently 'hedgerow farming' of Berry farm has left farmers with a very negative impression of what a 'Community Forest' farm may look like.

The following passages from farmers 6 'diversifier', 56 'traditional', 54 'conservationist', and 8 'conservationist' are assessments of the condition of Berry Farm. Farmer 6's comments are his interpretation of the view of the wider farming community. Both farmers 8 and 54 have contemplated hedgerow/woodland creation schemes with the Community Forest and yet are still critical of Berry farm's appearance:

"'What a bloody mess' [laughs] ... when they started they fenced it all off so that you couldn't get in there with a machine - didn't spray it all off so that within 12 months they had beans growing in it which were taller than the trees - and they had no way of killing it ... And everybody thought "Well, if that's the way it's going to be - you can have it." You know - and that was within the first two years and we thought "What a waste." (farmer 6)

Farmer : "You'd have thought they could have got on with it a bit better than that. There's a lot of ground there that's doing nothing at the moment. Which is the Council's ground isn't it. There was a 400 acre farm that they took over didn't they.

Interviewer: How much have they planted in trees then?

Farmer : What I can see of it, there's a 24 acre field at Hoo and that goes to the 421. Just a little bit of shaping-in that they've done .. and then left it?

Interviewer: What does it actually look like to you - the fields that have just been left?

Farmer : A mess. A mess. Looks like set aside.” (farmer 56)

“They’ve planted only 10 acres of it in trees. It’s an absolute waste to have great tracts of grassland.” (farmer 54)

Farmer : “I’m not sure what the idea is [behind the Community Forest]. If you look down the way to Wootton where there’s bits of trees and bits of grass - why they haven’t planted it all I don’t know...

Interviewer: Does it look attractive down there?

Farmer : No it looks a bit of a mess really. The hedgerows - all right they’ve grown them because they perhaps want to lay them in time but it’s a mess at Wootton.” (farmer 8)

Of particular interest in the way farmers referred to Berry Farm was the repeated use of the terms ‘mess’ and a ‘waste’ - reflecting the annoyance at the visual appearance of the fields and the moral objection at the withdrawal of the land from agricultural production. As observed by farmer 6, the visual condition of Berry Farm has encouraged farmers in the area to reject the scheme outright. In another example of this, farmer 35, a ‘traditional’ farmer, suggests of Berry farm: “You think, ‘If my farm’s going to look like that, they can forget it’.” For farmers it appears the social cost of moving from an ordered environment rich in established symbols of farming ability (e.g. straight furrows, weed free crops, crops of equal height) to one lacking symbolic value and widely viewed by the community as ‘messy’ is likely to discourage any participation. Farmers’ preferral for the entire farm to be covered in trees rather than the combination of woodland and open ground may reflect their liking for a neat and tidy landscape and crops of a uniform density and height. It may also reflect an attempt to visualise how trees should appear as a crop.

8.5.3 Access to woodland to judge 'husbandry' skills

One of the reasons woodland has no significance in terms of displaying custodial skills is the difficulty involved in judging the quality of woodland relative to judging the quality of crops or livestock. Woodlands are not amenable to the process of hedgerow farming as, where husbandry of crops and livestock is immediately visible from outside the boundaries of a farm, the quality of the husbandry within a woodland remains unknown even if a farmer was immediately adjacent to the wood. In the following passage, farmer 44 (one of only two farmers surveyed (both 'conservationists') who visit other farmers' woodlands to look at the conservation value of the woodland inside) explains the difference between woodland and crops:

"Woodlands? [Pause] - thing is with looking at crops - looking at sheep is that you can drive along a road and come to a gap or just look over a hedge as it were and just see them looking over the top without too much trouble. Look over the top of a nice flat crop of wheat and just see the oats sticking out of it. But a piece of woodland all you can see is a green wall and you can't see into it. What may look like an ordinary piece of woodland on the outside with hawthorn and a few bits of ash, inside it may be absolutely wonderful. It might be full of oxlips and primroses - but you don't know really. Or you can look at it and think "Oh, that's a nice wood." Whereas on the inside it might be so dense it's completely dead. You just can't tell just by glancing at a piece of woodland."

Because it is necessary to enter woodland to view the quality of the management, farmer 44 notes that it is only the 'shooting brigade' who generally see the inside of woodlands - and even then it is pheasant rearing skills that are on show rather than woodland management skills. Entry to woodland to observe management or conservation practices requires the permission of the farmer involved. This restricted access means that farmers cannot judge whether management practices are 'good' or 'bad'. Farmer 23 'diversifier' notes: "Do woodlands show whether a farmer's good or bad or not? *No*. Well, thing is with woodland you can't really tell unless you go in and have a good look at it." He then adds that the problem is that, while there are a few committed people who will visit other farmers' woodland, "for 80% of us if you can't make money out of it, it tends not to be done."

8.5.4 Crop turnover period

Selby & Petäjistö (1995: P74), in their study of afforestation in Finland, observed that farmers were likely to choose the forestry option of short rotation forestry for woodchips that, “closely resembles an agricultural crop (with a rotation of 4-7 years) rather than forestry (with a rotation time of 80-120 years)”, from which they concluded, “Perhaps for just this reason, the short rotation precondition proved to be surprisingly strong, almost as strong as the financial incentive.” While the lengthy woodland turnover period creates economic difficulties for farmers in terms of cash-flow problems, a less visible problem is the difficulties it may create for the maintenance of status within the community. Profit/loss is assessed on an annual basis with crop returns and, as Morgan & Munton (1971) suggest, farmers frequently will not look any further into the future than an annual assessment. As with economic profit in crops, Coughenour (1976: P84) suggests that profit in socio-psychological terms - while not necessarily assessed on an annual basis - “there is much evidence that it occurs periodically.” Results in the Marston Vale suggested that socio-psychological rewards are most forthcoming at times of maximum growth (where nurturing is most visible on a day to day basis) and harvest and that, as yield provides an important symbol of farming ability, the annual harvest may provide an important time for farmers to assess their position within the farming community. Two features of woodland in particular make it difficult to be assessed as a status symbol.

First, a problem raised by farmer 23 ‘diversifier’ was that the semi-permanent nature of woodland and its relatively slow response time to management initiatives means that a full history of the woodland is required before it can be judged whether the current farmer is doing a good job or not. He states, “anyone can look at a field of rape or wheat and say ‘That looks lovely’. But you can’t really look in a wood because you don’t really know who managed it 50 years before or what sort of state he left it in.” Thus, even if farmers were to frequent their neighbour’s woodland, its significance as a symbol of their ability is diminished through the possibility that they simply inherited it in its current condition. In comparison, with the minor exception of any influence of soil fertility (which would be rapidly depleted by poor farming practices), the visible

condition of arable crops or livestock will reflect the management practices of the existing farmer.

Second, a number of farmers were concerned that, whereas with arable crops any 'failure' can be remedied in the following season, with woodland any mistakes may remain visible for a far more extensive time period. Appreciation of a 12 month cycle in resolving 'mistakes' was reported by farmer 45 to be part of the farming culture as there is a saying to relate the situation: *'If you make a mistake it's there for 12 months of the year'* - which he explains as, "You make a mistake and everyone will see it in 12 months." Other farmers also reported that this feature of farming produces a negative sense of self-esteem for farmers and is consequently something that farmers are at pains to avoid. For example, farmer 39 suggests that when you make a mistake "you've got to sit and watch that until you get to this time of the year until it starts to lose its identity that bit." Of the farmers who have experienced problems with the mass die-off of new woodland plantings (farmers 6 and 10), there appears to be concern that the event should not be repeated. For example, farmer 6 expresses concern that if the trees he would like to plant die he would be "forced to look out the window for years and think 'Why the hell did I plant those trees?'... *There's nothing worse than having something die.*" This problem may be exacerbated if the WGS grant is accepted as it requires that farmers replant any lost saplings. Some farmers gave this as a reason for not accepting government grants when planting trees.

8.5.5 Perceived lack of a 'spiritual' or 'in the blood' connection with trees

While farmers experience a 'spiritual' link between themselves and the nurturing of arable crops and livestock, there is, in general, no similar connection between farmers and woodland. Observations that farmers have 'emotional' objections to non-agricultural use of farmland have been made in the Netherlands by Van der Meulen *et al.* (1996) in finding that farmers displayed 'spontaneous' emotional complaints about set-aside. Similarly, in Scandinavia, Selby & Petäjistö (1995: P70) discovered that, while attitudes to afforestation of agricultural land were important, the surprising result was the "strength and consistency of emotional objections." None of the farmers interviewed expressed satisfaction in the nurturing of trees and only one ventured to

offer a reason why this is the case. The exception, farmer 11 'diversifier', explained the phenomenon in terms of the degree of participation in the growth of arable crops compared to woodland - seeing the full life-cycle rather than a small proportion. When asked whether he feels the same connection with woodland as he does with his crops he comments:

Farmer 11: "No, ... I like walking through them ... I'll look at a nice tree and think 'that's a nice tree' but it doesn't, I don't get the buzz out of nurturing it from here [indicates a couple of centimetres]. I mean, perhaps if I did it for 20 years then I would.

Interviewer: So it's this thing of seeing it from the start?

Farmer 11: Yeah, I guess it's something to do with it - I mean, yeah, I guess its [pauses] ah - I don't know - If you wanted to get philosophical, you see the whole of life in twelve months."

This statement is then further explained as simply a matter of lacking the pre-ordained or 'in the blood' connection with trees - the lack of an ability to draw satisfaction from simply being in the presence of woodland.

"We aren't tree growers. Now I think that's what most of it's about ... that's not what we do. We're cereal ... arable farmers - we're not woodland or forestry people. And I don't know actually how you get around that unless somebody's offspring pops up and in his blood is actually trees. I think there may be one or two about. I mean, I've got a mate who could stand and look at a tree for an hour and be fascinated by it. That's what - that's his pride and joy. He's about the only one I can actually think of who would rather look at trees than arable crops." (farmer 11)

Note that, as both farmer 11 and farmer 27 observe that there are a small proportion of farmers for whom woodland is 'in the blood', the 'spiritual' connection with woodland is not entirely absent within the farming community. To appreciate woodland in this way would require that the farmer does not hold to the rigorous 'control over nature' aspect of good farming practice, i.e. he/she must maintain the belief that life will continue independent of the 'godlike' nurturing assistance of farmers and hold an appreciation of wild and 'unorganised' flora and fauna. Examples of this type of farmer are generally found in farmers from the 'conservationist' cluster, for example, farmers

who gain satisfaction from visiting woodlands and looking at the oxlips and primroses (farmer 44) or from living close to nature - e.g. deer, hares and birds (farmers 52 and 57). In these three cases, the appreciation of the ability of nature to look after itself (where a habitat is available) has led to the farmers adopting pro-conservation management strategies; namely, planting a butterfly conservation area (farmer 44), planting large areas of hedgerow (farmer 52), and leaving hedgerows untrimmed to provide food for birds (farmer 57). Support for the contention that conservation oriented farmers do not believe in exercising control over nature can be found in the work of Duram (1997) who found that organic farmers valued harmonising with nature, whereas conservative farmers valued mastery over nature.

8.5.6 Interest value of woodland

Unless a farmer is interested in conservation, woodland may simply be perceived as too boring to be seriously contemplated. There were three main areas in which farmers' current satisfaction with farming would be diminished through the adoption of woodlands on a commercial, or even semi-commercial, scale - a lack of opportunity to compete with neighbouring farms, an inability to view the full life-cycle of the crop, and the lack of 'gambling' interest in forestry. First, as discussed in an earlier section, status acquisition at harvest is not only measured by crop yield, but also through being with the 'leading farmers' to complete set farm tasks such as harvesting - particularly among the commercial farmers. With woodland, cycles of growth and harvesting are not as closely tied with those of woodlands on neighbouring farms. Thus, for highly competitive farmers there is little opportunity to obtain self-esteem as a 'leading farmer' through competing against neighbouring farms and woodland may consequently prove to be less interesting.

Secondly, some farmers noted that they receive considerable satisfaction from seeing the crop develop from seed to harvest - observing the full cycle of life (as noted above). For example, farmer 11 suggests "... it's a lot more enjoyable than working in an ordinary job - you see everything from start to finish." With the harvest time for trees at up to 120 years farmers would be unable to gain satisfaction from observing the full process. Even

with practices such as coppicing, while a harvest may be taken on an annual basis, the tree will not complete a full life-cycle within the farmer's time as manager.

The third issue derives from farmers' acceptance of "the continual variability of natural systems as inherent to the practice of farming," (Lemon & Park, 1993: P408) and the variability introduced by changes in the grant systems and the generally unpredictable returns. Researchers have observed that farmers derive satisfaction from the 'gambling' aspect of farming (e.g. Patrick *et al.*, 1981; Bartlett, 1986) in having to juggle all the factors involved in farming to maintain profit margins. This perspective provides farmers with a challenge from which considerable self-esteem can be generated from a favourable outcome. For example, livestock farmer 44 'conservationist' states "everything's always changing all the time which makes the job interesting." This interest culminates in the spring lambing which represents the most rewarding time of the year "when my skills have got to be at their finest." Farmer 27 'traditional' believes farmers look on wheat prices with something of a gambling mentality, suggesting they may look back on the previous year and think: "'We made a mistake this year but next year we'll do it this way and it will be right'. But the weather or something will change." Thus, as farming is never mastered, interest in the farm is maintained and the following year an opportunity arises to improve. In contrast to livestock and arable crops, farmers find woodland uninteresting, and consequently have little motivation to become involved with forestry. Farmer 6, when asked to compare growing woodland to growing crops suggests, "I think it would be pretty boring ... there isn't much pleasure in it for farmers." Similarly, farmer 11 observes, "Much as I like walking through woodland, it doesn't fascinate me. And I think at the end of the day farmers [pauses] they grow certain things and a lot of that has to do with what they enjoy." Farmers have been observed to make similar observations that farm diversification schemes in general simply lack interest, as Ilbery (1992) found that a basic lack of interest in farm diversification (and a wish to concentrate on agricultural production) was the most important factor for not participating in the FDGS.

An important aspect of the reward from gambling for some farmers is in playing what was referred to as 'the subsidy game'. The complex and varying nature of the subsidy system has turned the maximisation of subsidies into a means of obtaining status in the

farming community and, as such, was noted as something farmers brag about. Woodland subsidies are limited to 15 years and insignificant in comparison to the subsidies to be gained from other forms of land-use. Thus woodland allows farmers little opportunity to express their skills in manipulating the subsidy system.

If the majority of farmers are not interested in woodland and would gain little satisfaction from it as a crop, it may be predicted that there is unlikely to be a particularly high level of social significance attached to woodland planting. This proved to be the case. Other than small corners for shooting (which may be greatly prized), woodland is generally regarded more as a nuisance than a source of pride or self-esteem for farmers. Farmer 37 'diversifier' observes that the general attitude towards woodlands is, "they stick a fence around them, curse them like hell because they cast a huge shadow - and that's about as far as it goes." Farmer 39 'conservationist' notes that farmers are simply not interested in looking at each others woodland for status or any other reason as woodland holds no meaning for a 'farmer'. He gives the example:

"I might think going by Rex's and he's set some trees on a hill. 'Oh, Rex's set some trees' but that was as far as it went. And - er - I wouldn't be interested. I'm a *farmer*, I'm not a woodland manager."

Two farmers who have planted woodland observed that there has been very little comment passed about their trees. For example, farmer 8 'conservationist', when asked if other farmers have ever admired his 20 year old woodland planting states "I don't know whether they've admired it ... Yeah, probably they have. I don't know really. "Nobody's said 'You've done a good job it looks really beautiful.'" While farmers will comment widely on crops there is no general conversation about woodland. This may simply reflect a lack of interest in woodland, or that farmers have insufficient experience to judge whether the farmer has 'done a good job' or not and consequently feel unable to comment. In contrast, farmer 47 'diversifier' notes that farmers have passed comments about his woodland - however, these were all negative and centred around the economics of the venture. When asked if he regarded his woodland as a status symbol, farmer 8 suggests "I don't call that a status symbol ... it doesn't mean anything really." However, he later adds "it does to me." This concept that woodland has no widely shared meaning amongst the farming community but is left to the

individual farmer to decide on their approach was also observed by farmer 57, a 'conservationist' farmer and a newcomer to the farming community "I think we've all got our own views on the ways we look after our conservation areas and that's that really."

8.6 Summary and conclusion

While much has been written about economic reasons for the lack of the adoption of farm woodland planting, there has been very little investigation into possible social motivation - the implications woodland planting may have on a farmer's status within the farming community, their satisfaction with farming, their self-esteem, and, ultimately, their self-identity as farmers. This chapter has addressed the gap in the literature through investigating the social significance of crops to the farmer self-identity, as well as the mythology of being a 'farmer', and comparing these with the social significance of woodland. In summary, the results suggest that woodland has little symbolic value to farmers as it is widely incompatible with the existing symbols of 'good farming' practice. These are centred around the nurturing of crops and the relationship between farmers and their farms. Woodland is disadvantaged as a social symbol through both its untidy appearance relative to arable crops or livestock - visual appearance being the main socially established means of identifying a 'good farmer' - and its lack of accessibility to the widespread process of 'roadside farming' through which status related to nurturing ability is displayed. In addition, satisfaction is gained from farmers' role as 'creators' in nurturing a crop through its complete life cycle. This is also unavailable in the case of farm woodland as the maturing period of the crop is too long. Interest in woodland planting may also be restricted by the lack of an annual 'crop yield' to compare as a status symbol and the restrictions it places on the ability to display 'leading farmer' status. As a result of these main factors, farmers derive little satisfaction from the management of woodland and thus are disinclined to establish farm woodlands. Finally, farmers may feel a moral obligation not to plant woodland on agricultural land as the farm can be seen as having its own identity - representing, as it does, the cumulative role-play of preceding generations of 'farmers'.

In terms of the individual farmer identity clusters, the most important finding was that only farmers from the 'conservationist' cluster expressed any interest in entering other farmers' woodland to gauge the quality of the interior. Thus, as a measure of nurturing ability, woodland is only of any significance to this particular identity group (although its significance as a game habitat is more widespread). The origins of this 'interest' appear to be a fundamental difference in the perceived 'nurturing' role of the farmer. For the majority of the farming community an essential role is to nurture the countryside. There is a widespread belief that nature cannot survive without the 'godlike' influence of farmers and that the quality of nurturing is revealed in the uniformity of the crop and, particularly, the lack of 'weed' species. This perception is, to some extent, unsurprising in that the Marston Vale has been a culturally generated landscape for hundreds of years such that the animals and plants that remain *are* largely dependent on farming. 'Conservationist' farmers, in general, appear not to share these beliefs about controlling natural processes, but show greater appreciation of the intrinsic value of wildlife and nature. This enables them to appreciate woodland for its abundance of species, rather than valuing the monocultural control perspective of agriculture in which the restriction of 'weed' species diversify is highly valued.

The following chapter looks at the other major aspect of the Community Forest that may be affected by conflict with farmer self-identity; namely, the adoption of on-farm diversification schemes and the creation of a new generation of entrepreneurial woodland managers and leisure providers.

Chapter 9: The effect of farmer identity on diversification and public access provision

9.1 Introduction

The previous chapter explored how woodland relates as a symbol of the farmer identity and may influence the decision to plant woodland within the Community Forest zone. However, the Community Forest project is not only about the creation of woodland, but also aims at converting farmers into entrepreneurs who can utilise the products or market opportunities produced by the 'forest'. For as Hodge (1996: P335) comments of the Rural White Paper: "We have recently moved into a new venture whereby government seeks to stimulate the creation of interesting and diverse landscapes for public enjoyment." However, he also observes, "there is a gap in the thinking about how the new future is to be designed. Where do the ideas come from? *Who are the new entrepreneurs?*" If the 'new entrepreneurs' are to arise phoenix-like from the ashes of a demoralised farming industry, there is the small matter (as Hodge intimates) of whether they have any desire to adapt to this new entrepreneurial role. It has been shown through the cluster analysis and is widely recognised in the literature that certain farmers are amenable to diversification or even true entrepreneurial activity while others steadfastly resist (for examples see Sachs, 1973; Bryant, 1989; Ilbery, 1991; Ilbery *et al.*, 1996; Austin *et al.*, 1996). This resistance is viewed as largely attributable to cultural factors and, in particular, the desire to remain as a farmer - with economic and structural factors playing a relatively minor part in most cases (Ilbery & Bowler, 1993). Yet, as little is known about the farmer identity, there is little understanding of the connection between farmer identity and diversification. Therefore, one question to be resolved in this chapter is: what is the relationship between farmers' desire to remain a 'farmer' and their adoption or choice of diversification enterprise?

The other salient issue discussed is the importance of the identity clash between the farming community and the general public in the adoption of a scheme which promises increased levels of public access to farmland. While there is little to suggest that the public poses a serious economic nuisance (with the exception of some urban-fringe

enterprises), the level of farmer resistance to public access to both farmland and woodland is almost legendary (e.g. Lean, 1996; Fraser, 1996). Although it is tempting to simply attribute this to a desire to retain the privileges of power, it may be more than privilege that is at stake. As was evidenced by the recent countryside march (Harding, 1998), the countryside is perceived as being under siege from urban ideas, urban values, and the urban masses. The rural roles of the farmer - with hunting and shooting as only the most contentious examples - are under threat from the infiltration of urban value systems and the redefinition of rural space around the needs and wants of a predominantly urban oriented population (see Marsden & Flynn, 1993). With this in mind, it must be apparent to the farming community that any schemes designed to increase public participation in the countryside are likely to exacerbate the problem and consequently speed the decline of the traditional farming way of life. Therefore, the conflict between the roles farmers see themselves performing and those perceived as appropriate by the general public may have a considerable impact on farmers' resistance to the Community Forest scheme. The questions thus emerge: How do the farmer and public identities interact? - and what influence is this likely to have on Community Forest participation?

This chapter is divided into three sections. The first (9.2) investigates the connection between diversification and the ability to maintain the 'good farmer' identity, namely: how do farmers determine whether a diversified farmer is still a farmer, rather than a businessman who farms? The second section (9.3) looks at areas of potential identity conflict between the farming community and the public that may lead to resistance to diversification into leisure and public access provision. Finally, the third section (9.4) presents a typology of 3 diversification types based on the degree of movement away from the farming role required by any participating farmer and analyses quantitatively the differences between the three types.

9.2 Diversification - when is a farmer not a 'farmer'?

It is widely acknowledged that diversification has increasingly become part of the farming role during the recent decades as farmers throughout the UK and Europe have been forced to adjust their businesses through financial pressures (Ilbery, 1988;

McLaughlin, 1992; DeVries, 1993; Ilbery *et al.*, 1996). In the Marston Vale, just over half of all farmers (53%) have some form of diversification on the farm or operate a contracting business. Amongst this group, there appear to be some differences at the sub-culture level as to the desirability and significance of diversification. For, as the cluster analysis in Chapter 7 revealed, farmers from the pro-change 'diversifier' and to a lesser extent 'conservationist' identity sub-cultures appear more able to adopt diversification roles while still maintaining their self-identities as farmers. Others, however, in particular the older more traditional farmers, appear to reject the diversification concept as not being part of the role of a 'good farmer'. The issue, as far as farmer identity is concerned, is not the presence/absence of diversification, but the extent to which the diversification scheme interferes with the more traditional status-providing farmer roles. This may have important implications on whether an agricultural producer continues to be viewed as a 'good farmer' by his/her peer group.

This raises the question: What changes in role performance indicate that a diversified farmer has ceased to be viewed as a farmer in the eyes of the farming peer group and instead is widely viewed as a 'businessman' or 'industrialist'? As discussed in Chapter 8, acceptance of a farmer as a 'good farmer' is largely dependent on his/her ability to display husbandry skills, commitment to the agricultural role, and a 'spiritual' connection with the farm and the crops. However, where a 'farmer' has heavy non-agricultural business commitments the farming roles may need to be performed by an employed labour force, and thus the status symbols of a 'good farmer' are generated by employees and not the farmer himself. The employment of labour itself does not necessarily detract from a farmer's status - in fact, the custodianship of agricultural workers can be seen as a symbol of a 'good farmer' (Gasson, 1973) and the number of workers employed act as a status symbol within the farming community (Newby *et al.*, 1978). However, this study suggests two criteria are essential for a farmer to remain as a 'good farmer'; namely that the farmer (a) *must* maintain direct contact with the land through the meaningful performance of the regular farming roles, and (b) *must* hold responsibility for the managerial (custodial) decisions on the farm.

Of particular concern to farmers is the first criterion: 'good farmers' must maintain hands-on contact with the agricultural working of their land. An absentee farmer who is

not involved in the day to day activity of the farm is no longer perceived as a 'good farmer' but becomes a 'landowner' or a 'businessman', even if he/she chooses to perceive him/herself as a farmer (as is often the case with part-time farmers according to Coughenour, 1995). This division may be associated with the perceived connection between the farmer and nature - i.e., why would a real farmer want to do anything but farm? Exclusively working with the land in this fashion also appears to confer some status on the farmer as is observed by farmer 40's self-definition distinguishing himself as a 'real farmer' from 'farmers' who are in his eyes 'businessmen'. He states with pride: "A lot of farmers are not real farmers - I do all my work and am a real farmer."

The importance of managerial control over the land in differentiating between a farmer and a businessman is explained by farmer 44 'conservationist', and provides an example of the general feeling in the farming community. When asked if a farmer progressively diversified until he spent all his time in the diversified activity 'would you still call him a farmer?', he suggests "I think I'd be more likely to call him an agribusinessman. To be a farmer you should have more control over your patch rather than someone farming it for you." He then forwards a hypothetical situation of a farmer with a 4000 to 5000 acre farm:

"to properly manage all that area so you might actually need managers to manage it. It's one thing having a manager if they're still answerable to you. But if they've [the managers] just got *carte blanche* to do it then you wouldn't call them a farmer. You'd call them a *landowner* probably. *You wouldn't actually call him a farmer because he doesn't actually have day to day or week to week control over what he's doing.*" (farmer 44)

In this case the 'manager' is also unlikely to be termed as a 'farmer' because of his lack of ultimate responsibility for the land and, as suggested by farmer 37, to be a farmer requires the existence of "family connections" with the land. In line with the 'agrarian myth' (see Section 8.4.1) there is seen to be something inherently honest and good about performing farmwork that may be lost when a farmer decreases his/her direct contact with the land. Farmer 45 'traditional' defines the 'farmer' extreme of the farmer/businessman continuum as "a chap who's up to his neck in shit. String holds everything together ... and it's run on a shoestring." He suggests that many of the wealthier farmers in the district are not 'real farmers' but "are basically industrialists ... the one who's got

the money and all the gear and everything's up to date." A number of farmers classified as 'traditional' held this animosity towards the larger commercial farming enterprises (also noted by Gasson, 1974).

While, in the past, diversification has been perceived as both indicating an economic weakness in the farm (Blunden & Curry, 1988; Bryant & Johnston, 1993) and/or suggesting a move away from farming (De Vries, 1993), few farmers outside of the 'traditional' group mentioned that diversified farmers are not 'real' farmers - providing the main criteria outlined above are complied with. However, one 'diversifier' farmer (37), once stigmatised as not a 'real farmer' because of his pluriactivity as a builder, observes (with a degree of satisfaction) that this is a relatively recent phenomenon and one not widespread throughout all members of the farming community.

"I think, people who are pure farmers who've got such a large output that do nothing but farming still tend slightly to look down their noses at anybody who farms that does something else. And - that was a bit prevalent say 10 or 15 years ago and then suddenly you find that farmers who tended to look down at people who did, say, caravan sites or rough terrain bike riding - things like that - suddenly find themselves as part timers because they've divided off and got themselves an interest in a golf course. Um - Suddenly they've developed all their old buildings on an outlying part of their farm as industrial units. Suddenly even these big ones are now possibly part-timers. So if you're a farmer and suddenly you get half your income from industrial units on your farm - does that make you any less a farmer?"

The change in economic conditions within the Marston Vale appears to be creating a change in the definition of what constitutes appropriate farming practice, as the 'diversifier' role is losing its meaning as a symbol of failure as a custodian of the land. Thus, as symbolic interactionist theory would suggest, the meaning of 'farmer' is being renegotiated by the group to include the new farming roles - emphasising that the identity concept is dynamic and not deterministic. Although diversification is still perceived as widely peripheral to farming (as observed by Halliday 1989), it no longer carries the stigma of representing failure. Nevertheless, some of the older 'traditional' farmers used the argument that diversification is not 'real farming' as a reason for not adopting commercial forestry. For example, farmer 14 states "No farmer's got income

from anything except farming.” This perception amongst this group is understandable given that the older ‘traditional’ group of farmers identified through the cluster analysis is largely defined by its resistance to change.

9.3 Diversification into leisure and access provision - potential areas of identity conflict

As one of the main objectives of the Community Forest scheme is to provide a recreation area for the urban population, the question of farmers’ willingness to diversify to manage leisure facilities for the public is an extremely important one. Of all the role changes proposed for farmers in Community Forests, diversification ventures such as visitor centres, farm trails, open days, craft courses, livery, theme visits, environmental education, fishing, motorised sport grounds, toll rides, water sports, fitness trails and adventure playgrounds (Countryside Commission, 1993: P7) are the furthest away from the traditional role of the farmer where isolation and independence are paramount. Much of farmers’ willingness to adopt the leisure-provider role is likely to rest on their current social relationship with the general public, and in the Marston Vale survey it was clear that this relationship is seriously strained (this follows a national trend - see Ratcliffe, 1997: P4). For the farming community, the urban population constitutes a major counter-identity, widely perceived as a group that do not share any common meanings or symbolic beliefs with farmers.

From the open question in the main farmer questionnaire¹ it was apparent that objection to leisure schemes was firmly centred around farmers’ unwillingness to permit public access to farmland, with 38% of farmers stating it as a reason for not pursuing this form of diversification. This reluctance (observed as a widespread phenomenon) is often attributed in the literature to the potential interference with farm management that may be caused by allowing public access (e.g. stock damage, litter, theft, vandalism - Coppock & Duffield, 1975; Kaylen *et al.*, 1993; Williams *et al.*, 1994). However, as with economic responses to questions on the establishment of farm woodland (Chapter 3), this may simply extend from farmers’ wish to avoid the more complex issues of

¹ The question: “Do you see the provision of leisure facilities for the public as something farmers would ever seriously consider?” (why or why not?) was asked.

cultural conflict between the two groups. In particular, farmers' cultural self-image as the 'farmer steward' (McEachern, 1992) and custodian of both nature and local village communities is under threat from changing social values.

9.3.1 Identity conflict between the public and farmers

Farmers have, in the past, been able to maintain a self-image as stewards of both the countryside and the local village communities. However, during the last decade public resistance to the farmer self-image as a countryside steward has grown (Baldock, 1989; Adams, 1996). Adams (1996: P77) suggests the debate was divided into two competing myths:

“... the agricultural lobby's myth of the farmer-steward, tweedy and rooted deep in the past, a creator of beauty and value. On the other was a mythic landscape rich in wild creatures that was of great beauty, redolent of freedom and harmony, and that was, above all 'natural'.”

The 'farmer-steward' myth still exists and is an important part of the current farming community's self-image (McEachern, 1992; Colman, 1994). However, responses from the farmers surveyed suggest it is being undermined by the public, for whom the countryside represents the natural world, and within which farmers are increasingly seen as destroying the 'natural' balance. Many farmers expressed concern that the public simply does not understand the principles of farmer-stewardship - in particular, the (self-perceived) strong dependence of the countryside on the 'creator' farmer. As discussed in Chapter 8, the conflict is between the belief that the natural world is preserved by farmers' husbandry practices and the belief - more prevalent among 'conservationist' farmers - that nature is capable of maintaining itself.

In terms of their traditional role as stewards and benefactors of local village communities (see Newby et al, 1977), farmers appear to have (with the exception of farmers around the village of Stagsden) largely given up on the increasingly urbanised villages. Along with providing a disproportionate amount of power, farmers' previous dominance of local councils enabled them to perceive themselves as altruistic and philanthropic in their performance of public service duties (Newby *et al.*, 1978).

However, with the movement of new urban social groups into “positions of social and political leadership” in the countryside (Lowe *et al.*, 1993: P207), farmers have been increasingly pushed out of these traditional roles and consequently a number have lost an important aspect of their self-identity. The role of the farmer in a Parish Council has become (as farmer 53 an older ‘traditional’ farmer and long-standing Council member suggested) largely defined through confrontation with the townsfolk and no longer provides a sense of public service. Another problem with farmers maintaining their self-perception as benefactors is that this requires positive feedback. A number of farmers reported that acknowledgement of farmer assistance to the local community (e.g. using heavy machinery during snowstorms, maintaining footpaths) is becoming increasingly scarce as the public is ever more demanding and less appreciative of any public service behaviour.

Through challenging farmers’ traditional self-perceptions as stewards, the public has grown to represent a threat to their self-identity. There is some suggestion in the literature of an attempt to re-establish the farmer-steward myth during the 1980s and 1990s. At this time farmers’ self-image as nurturers was coming under increasing threat from the environmental lobby as a result of the damage caused by intensive farming practices, and farmers had to reassert their self-image as the countryside’s trusted custodian (McEachern, 1992). Again, in the 1990s, the BSE crisis and media images of diseased cattle - coupled with protests concerning live animal exports - led farmers to assert the ‘farmer-steward’ identity in an attempt to justify the behaviour of the agricultural industry (Young *et al.*, 1995). This use of rural identity to strengthen arguments in conflict situations has also been observed with respect to restricting the influx of urbanites into the countryside (Bell, 1992). The outcome of this process has been to bring the ‘farmer-steward’ into increasing conflict with what are commonly labelled in the farming community as ‘townies’, ‘the green-welly brigade’, ‘joe-public’ or even ‘foreigners’. Maintenance of the traditional role and identity of the ‘farmer’ depends on resisting the intrusion of urban values into the countryside. Thus, the concept of actually encouraging the public onto farmland (in any form) appears to have become, to evoke Shucksmith’s (1993) terminology, simply ‘unthinkable’ amongst the majority of the farming community.

9.3.2 Public access and Community Forest participation: resistance to leisure diversification

In the case of woodland, concerns about public access can be exacerbated for practical reasons. The general concealing nature of woodland and often peripheral attention given by their owners have been suggested by Williams *et al.* (1994) as important reasons behind farmers' reluctance to plant woodland in the Greenwood Community Forest. A number of farmers with woodland on or adjacent to their farms in Marston Vale have reported problems including burnt out cars and armed trespass, fire lighting, providing a hide for trespassers, and providing an observation point for burglars. Planting woodland is one issue, but planting woodland and permitting public access appears to be an entirely different proposition. There is abundant evidence to suggest that this is a UK wide phenomenon. For example, Lean (1996) reports of the sell-off of Forestry Commission woodlands that, while the Commission was empowered to make 'access agreements', "woods with access arrangements have proved harder to sell, because would-be private owners have not wanted to let people onto their prospective property" (P7). Similarly, Gasson and Hill (1990) suggest of the Farm Woodland Scheme that "scarcely anyone" (farmers and landowners) was establishing new woodlands with the intention of providing public access. Bishop (1992: P152) goes so far as to state that even the "provision of enhanced grant levels are unlikely to result in the creation of new woodland areas if unlimited public access is required" and Allison (1996) suggests that all evidence from the Midlands forest indicates "most farmers would require exorbitant sums to provide new access as well as to plant trees" (P137).

One hypothesis to explain the level of rejection of combined woodland and public access is that allowing public access increases the social disincentives for woodland creation in addition to the combined economic and social disincentives of woodland planting itself. If this is the case, it suggests that an increase in the relative profitability of trees is unlikely to result in the forestry related diversification schemes the Community Forest project initially envisaged (MVCF, 1993) as the social disincentives remain strong. In fact, because of its emphasis on public access, the Community Forest zoning may eventually prove a disincentive for woodland planting through fear of attracting the attention of the public and its threat to the farmer identity as discussed

above. Farmer 55 'traditional', a well established farmer of 280 hectares articulates this fear.

"The Community Forest is something I don't welcome. It'll bring masses of people here - that's the major concern. It'll put the onus on us to deal with it"

The issue of encouraging public access generates concern amongst the farming community that other farmers may create problems by participating in the Community Forest scheme. This point has been observed in Marsden *et al.*'s (1993: P79) comment that: "Development on one farm can create pressures and disruption for neighbouring farmers. Diversification may be an economic panacea for certain households but can provoke resentment among those striving to farm as 'normal'." Consequently, there appears to be a degree of social pressure to refrain from leisure-based diversification schemes. There is a suggestion that there may be considerable loss of status within the farming community by any move into Community Forest participation, simply for the reason that it is against the interests of the wider farming community who wish to remain as 'farmers'. Farmer 55 a 'traditional' farmer from a well established and reputable family articulates this general concern in suggesting "farmers going into the Community Forest will make it difficult for neighbouring farmers," and similarly, farmer 11 - a young 'diversifier' - suggests that any farmer who participated in a Community Forest project, no matter how reputable the family, "they'd automatically be seen as 'There's something strange about him'." Thus, to maintain status as a farmer may require the farmer to conform to the group norm, i.e. reject any overtures by the Community Forest team to diversify into leisure facilities or undertake any other activity that encourages the public into the area.

9.4 An identity-based classification of farmer diversification schemes

In order to investigate the relationship between identity and diversification enterprise choice further, a typology of diversification types is proposed, based on the interference of diversification with the symbols of status acquisition - agricultural nurturing ability

(diversification involving the continuation of the farmer role), custodianship (diversification based on custodial roles for the enterprise but involving decreased commitment to nurturing), and entrepreneurial (diversification involving a decrease in both the nurturing and custodial roles and integration into the market system). This typology builds on Ilbery's (1991) division of diversification types into 'agricultural' and 'non-agricultural' (structural) approaches to generating additional income through the introduction of a sound theoretical basis for the division of enterprise type derived from the social significance of the scheme. Division of enterprises in this fashion accounts for concerns farmers feel for any potential loss of self-identity and, therefore, the considerable social resistance to diversification observed by researchers (e.g. Halliday, 1989; Ilbery and Bowler, 1993). A more comprehensive definition of the diversification types is outlined as:

1. Agricultural: (16 farmers) Enterprises which involve a simple extension of farming (particularly *nurturing*) skills, with no substantial change in the farming role. These are likely to use resources already available to the farmer. This category includes diversification in which no money changes hands such as the co-operative practice of 'neighbouring' (providing mutual assistance) observed by Mather & Thompson (1995). Examples of this diversification type include contracting on farmland (the majority of activity in this category), doing odd jobs (such as repairing machinery and infrastructure).
2. Custodial: (15 farmers) Enterprises that require a minimal effort to maintain and do not involve a high degree of marketing. They offer continuity of role in that once established, they simply require the farmer to perform a *custodial* role over the enterprise. Alternatively, they may rely on other members of the family such as the spouse to provide the labour force. Examples include: renting buildings for industry, letting houses, bed and breakfast, and caravan parks.
3. Entrepreneurial: (9 farmers) Enterprises which involve a considerably greater resource commitment from the farmer him/herself as well as an understanding of basic free-market principles. Consequently, they represent a substantial move away from the

‘farmer’ role. There is substantially greater economic risk involved, but also the possibility of a substantially greater gain. Examples include: construction, manufacturing, processing and marketing of agricultural goods (e.g. butcher), and direct marketing (e.g. selling horse feed) and growing Christmas trees, which Slee (1987) suggests is highly dependent on marketing.

Diversification enterprises in the Marston Vale were each coded into one diversification strategy on the basis of the criteria outlined above. To test the contention that each strategy represents a more substantial move away from the ‘agricultural producer’ identity, salience index results for the ‘agricultural producer’ and ‘diversifier’ identities were compared between farmers *with* diversification schemes of each type and those *without* (note: at this stage of the analysis some farmers were represented in more than one diversification type). Also compared were the responses from the role-identity index to the farming role ‘Make extra income through on-farm diversification schemes’ (rated from ‘always’ to ‘never’). The comparisons involved the use of nine separate Mann-Whitney tests, the results of which are presented in Figure 9.1.

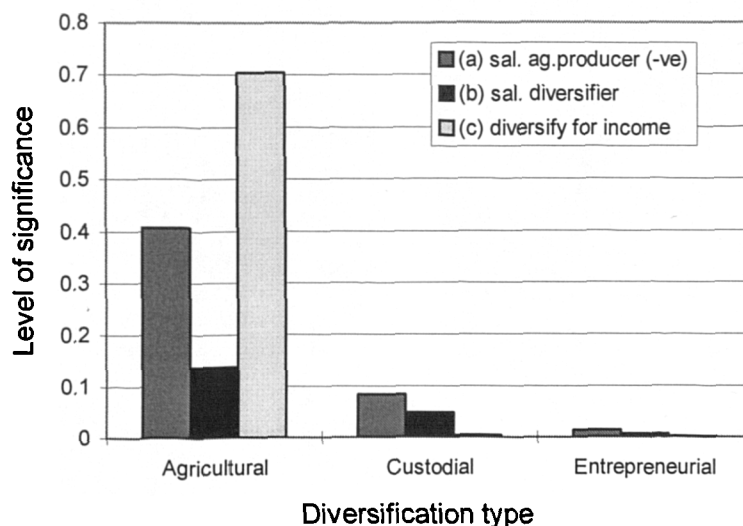


Figure 9.1: Level of significance in difference between farmers with ‘agricultural’, ‘custodial’ and ‘entrepreneurial’ diversification schemes and those without such schemes in terms of (a) the salience of the agricultural producer identity (results are negative), (b) the salience of the diversifier identity, and (c) evaluation of the role ‘make extra income through on-farm diversification schemes’. Significance results close to zero suggest there is a considerable difference (significance at the level indicated on the y-axis) between farmers *with* the diversification type and those *without*.

Figure 9.1 provides support for the contention that the diversification types proposed in the above typology each represents a successive move away from the agricultural producer identity. For farmers with an 'agricultural' diversification scheme there is no significant difference in the salience of either the agricultural producer or diversifier identities compared to farmers without 'agricultural' schemes. For those with 'custodial' schemes the differences are becoming more significant with farmers beginning to perceive themselves as 'diversifier' farmers and less as 'agricultural producers', and farmers with 'entrepreneurial' schemes are likely to hold both the 'diversifier' identity significantly more salient and the 'agricultural producer' identity significantly less salient. Further, evaluation of the farming role of 'make extra income through on-farm diversification schemes' shows that farmers operating 'agricultural' diversification activities evaluated this role in a similar fashion to farmers who had not diversified; whereas, farmers operating both the 'custodial' and 'entrepreneurial' schemes rate the role as significantly more important.

To analyse the results further required that each farmer be classified as only one of four types; namely, 'non-diversifier', 'agricultural diversifier', 'custodial diversifier', or 'entrepreneurial diversifier'. As farmers may have more than one type of diversification scheme on the farm, it was necessary to make the assumption that their disposition towards diversification is represented by the diversification 'type' with the highest salience of the diversifier identity- regardless of the number of lower hierarchy schemes on the farm or the proportion of income from diversification. Thus, for example, a farmer with an 'entrepreneurial' diversification scheme and an 'agricultural' scheme will be classified as an 'entrepreneurial diversifier' - or a farmer with one 'custodial' scheme and two 'agricultural' schemes as a 'custodial' farmer. A line graph of farmers classified in this manner against the mean rank score of their 'agricultural producer' salience, 'diversifier' salience, and evaluation of the 'diversifier role' is presented in figure 9.2.

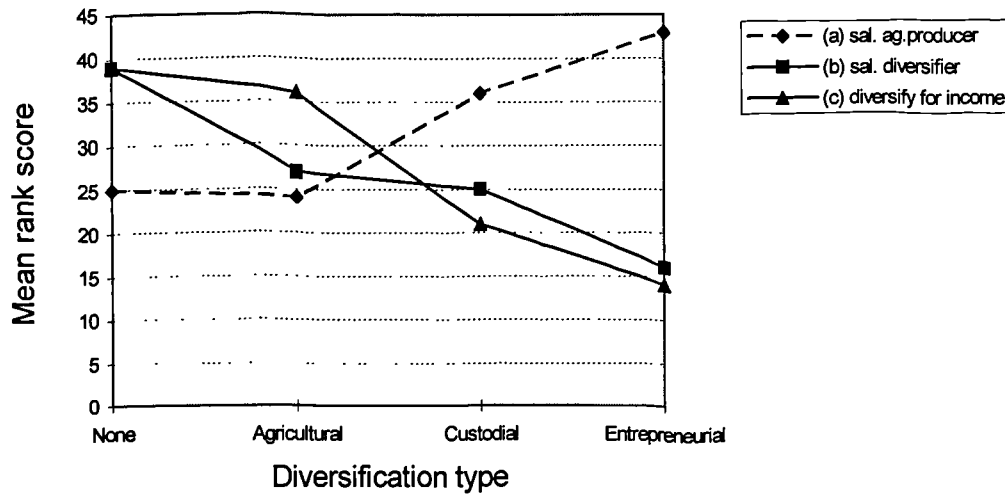


Figure 9.2: Differences in mean rank scores of (a) the salience of the agricultural producer identity ($H = 10.55$, d.f. = 3, $P = .014$), (b) the salience of the diversifier identity ($H = 14.74$, d.f. = 3, $P = .002$), and (c) evaluation of the 'good farmer' role 'make extra income through on-farm diversification schemes' ($H = 21.26$, d.f. = 3, $P < .001$) - for farmers whose *greatest* diversification scheme in terms of salience of the diversifier identity is 'none', 'agricultural', 'custodial' or 'entrepreneurial'. Low rank values for (a) and (b) represent high salience, and low values for (c) 'always' looking to diversify.

Figure 9.2 suggests that there is little difference between the identity of farmers who have undertaken only 'agricultural' diversification schemes and those who have not diversified at all. In particular, this group appears relatively unenthusiastic about diversification as a means of income generation. In contrast, as the farmers move from 'custodial' to 'entrepreneurial' diversification types, the 'diversifier' identity becomes progressively more salient and the 'agricultural producer' identity correspondingly less so. As observed by Ilbery & Bowler (1993), to some degree the choice of diversification scheme may have been restricted by structural aspects of the farm, in particular the area of land owned and farm income. There was also a significant difference between the four 'types' and the total area of land owned, with 'agriculturally' diversified farmers owning considerably less land than the remaining three groups ($H = 9.83$, d.f. = 3, $P = .020$). Not surprisingly perhaps, this is also reflected in their income from agriculture with the 'agricultural' (mean rank = 21) and 'entrepreneurial' (mean rank = 18)

obtaining the lowest returns, and the ‘non-diversified’² (mean rank = 34) and ‘custodial’ (mean rank = 36) farmers the highest ($H = 10.28$, d.f. = 3, $P = .016$). One possible explanation for the choice of diversification enterprise may be that farmers owning smaller areas of land (or none) are unlikely to have agricultural buildings to convert to ‘custodial’ diversification schemes nor permission of the landlord to run ‘entrepreneurial’ schemes from the farm. There is some qualitative evidence to support this in that some of the tenant farmers have been blocked from ‘entrepreneurial’ schemes by the landlord (e.g. farmers 48 ‘diversifier’ and 59 ‘diversifier’) and, as farmer 44 ‘conservationist’ suggests, custodial diversification is often simply a matter of being fortunate enough to have redundant farm buildings to convert. The influence of structural factors as a constraint on diversification options may explain the lack of any significant relationship between the diversification types and the identity clusters.

While farm structural factors can undoubtedly contribute strongly to the diversification type chosen, support may also be found for a social basis for the selection of enterprise type. In addition to the reported relationship between enterprise type and identity salience, there is some suggestion that farmers with no diversification schemes and those who operate only ‘agricultural’ schemes have less interaction outside of the farming community than the ‘custodial’ and ‘entrepreneurial’ diversifiers. Farmers with no diversification (mean rank = 35) and ‘agricultural’ diversification schemes (mean rank = 39) provided significantly lower ratings of the role ‘Mix with urban people’ than those with ‘custodial’ (mean rank = 21) and ‘entrepreneurial’ (mean rank = 25) diversification schemes ($H = 8.82$, d.f. = 3, $P = .032$). Similarly, farmers with no diversification (mean rank = 26) and those with ‘agricultural’ diversification schemes (mean rank = 29) had significantly fewer numbers of non-farming friends than those with ‘custodial’ (mean rank = 37) and ‘entrepreneurial’ (mean rank = 37) diversification schemes ($H = 10.25$, d.f. = 3, $P = .017$). As neither of these variables were used in producing the identity salience indices, this provides corroborative evidence that farmers committed to farming as a way of life are likely to choose either not to diversify or to engage in the ‘agricultural’ form of diversification.

² This group includes a number of large tenant farms owned by major landholders on the valley floor, thus agricultural incomes are relatively high.

Of greatest relevance to the Community Forest scheme is the nature of the 'entrepreneurial' diversifiers as these farmers represent the new entrepreneurial farmer type required by the Rural White Paper (Hodge, 1996). There are some encouraging signs about this group as far as the Community Forest is concerned. In particular, there is some evidence that this group may be more conservationist and amenable to the Community Forest objectives than the non-entrepreneurial farmers. First, while only significant at the 90% level, the conservation oriented items "Look to create new wildlife habitat" ($U = 147$, $N = 60$, $P = .084$) and "Always have nature conservation as your number one priority" ($U = 140$, $N = 60$, $P = .059$) were viewed as more important tasks to perform for farmers with entrepreneurial schemes than those without. Secondly, farmers with 'entrepreneurial' diversification were likely to have planted significantly larger areas of woodland/trees than farmers who did not have an 'entrepreneurial' diversification scheme ($\chi^2 = 4.60$, d.f. = 1, $P = .032$) as well as to have indicated that advice from the Community Forest team was more important in their management decisions ($\chi^2 = 4.82$, d.f. = 1, $P = .028$). It may be speculated that this apparent conservationist orientation results from (a) a lack of reliance on the land ('entrepreneurial' diversifiers earn a significantly higher proportion of their income from diversification, $U = 39$, $N = 60$, $P < .001$), (b) lower salience of the agricultural producer identity, and (c) a greater willingness to see change on the farm. These factors enable the farmer to place a greater priority on nature conservation uses for the farm. Note that only one of the 9 farmers in this group comes from a non-farming background, thus it is farmers with a genuine farming ethos who are becoming the 'entrepreneurs' - rather than urban entrepreneurs buying hobby farms.

While these signs are encouraging for the Community Forest, there is evidence that entrepreneurial schemes of this sort are extremely difficult to establish - particularly in times of economic hardship. Of the farmers who tried to establish entrepreneurial enterprises in the late 1980s few succeeded. As one would-be entrepreneurial farmer (16 'diversifier') put it, "It's almost impossible to start a business in times of recession." Three 'diversifier' farmers in the Vale (15, 16 and 29) encountered serious financial problems because of such schemes and a further two farmers (18 and 19) mentioned a nearby farmer who opened a farm shop which failed badly. While two of the 'entrepreneurial' diversification schemes have been established since the farm recession

of the 1980s the majority were established in better economic circumstances. One of these entrepreneurs (farmer 3 'traditional') explains how changes in the market have made his form of diversification (construction) more difficult to initiate: "Margins are a lot tighter now than they used to be. A few years back you got £80,000 for one job but now you're lucky to get £4,000." If this holds true across the economy (as seems likely with the current high value of the pound, high interest rates, and the economic slowdown) there may not be many easy opportunities for new entries into 'entrepreneurial' diversification.

Instead, the approach to diversification that has become more prevalent over the last 10 years has been the more agriculturally based 'custodial' form. This may reflect Boucher *et al.*'s (1991) observation that the relaxation of planning policies in the 1980s has tended to favour the re-use of existing buildings over alternative uses of agricultural land. Farmers in the Marston Vale (particularly commercial owner occupier farmers) appear to be accepting this form of diversification as standard farming practice. Nevertheless, that their main emphasis is still in agriculture is unquestionable. Fourteen of the fifteen farmers with this form of diversification scheme were listed in the Yellow Pages under 'farmer' (a significantly higher proportion than farmers from outside of the 'custodial' group - Fisher's exact, $P = .046$) which Burton & Wilson (in press) argue indicates a commercially rather than conservationist oriented behavioural approach to agriculture. To support this contention, analysis showed that a significantly higher proportion of farmers with 'custodial' diversification believed the Community Forest scheme was essentially a bad idea ($\chi^2 = 6.606$, d.f. = 1, $P = .010$). In terms of a change in their attitudes to diversification, while farmers from this group were no more likely to have diversified since 1987 ($\chi^2 = 0.370$, d.f. = 1, $P = .543$), they indicated strongly (measured on an 11 point scale) that their approach to farm management has become more diversified since 1987 ($U = 77$, $N = 60$, $P < .0001$). As results for the other three groups showed no significant differences, it may be concluded that the commercially minded farmers with the resources to diversify in this way are beginning to regard it as an acceptable aspect of standard farming practice. Indeed, this was also the overall impression from the qualitative surveys with farmers expressing a degree of pride in both their agricultural roles and an efficient custodial diversification scheme - particularly the low-maintenance industrial unit conversions.

In summary, there does not appear to be any current mass transformation from the standard 'farmer' identity to the 'entrepreneurial' type of farmer desired by the authors of the Rural White Paper (Hodge, 1996). Rather, farmers who do not wish to leave the farming roles are adopting systems of diversification that, while lower in economic reward, do not lead to a substantial reduction in their identity as an agricultural producer. Most of the truly entrepreneurial farm enterprises in the Marston Vale were established prior to the farm crisis in the early 1980s. These farmers have maintained their identity as 'farmers' but have experienced a considerable increase in the relative salience of the 'diversifier' identity and subsequent decrease in the salience of the 'agricultural producer' identity. With the economic pressure taken off agricultural production aspects of the business, they also appear to have been able to adopt a more conservation oriented approach to land use. Thus, these farmers typify the 'new farmer-entrepreneur' role the Community Forest scheme appears to be encouraging.

However, the type of diversification in ascendancy at the time of the survey was that involving the extension of the farmers' custodial role to incorporate the custodianship of diversified enterprises such as stables and industrial unit conversions. In addition to allowing the farmer to maintain a custodial approach, such enterprises are in general less time-consuming than entrepreneurial schemes as farmers are not required to learn the skills of the market system, and other family members (such as the spouse) may become involved in the management roles required. Thus, in contrast to entrepreneurial diversification, the farmer can maintain the 'time on the land' aspect important to maintaining the farming identity. While these practices lead to an increased salience of the diversifier identity over that of 'agricultural' diversification schemes, farmers maintain a greater salience of the 'agricultural producer' identity than entrepreneurial farmers. On the negative side (from the Community Forest perspective) the farmers are likely to be actively opposed to the Community Forest project, and the custodial schemes do not generally involve the provision of leisure facilities for the public. Even where stables are established, the custodianship is of the horses rather than the public. While this group of farmers are not likely to minimise interaction with urban people as is the case with 'agricultural' diversifiers, they appear, nevertheless, unwilling to embrace the provision of public leisure as part of the farmer role.

9.5 Summary and conclusion

This chapter has investigated the influence of farmer identity on diversification decisions. While there are without doubt other contributing factors to the decision to diversify and/or allow public access, it is clear that the previously neglected role of farmer identity can play a substantial part in determining the farmer response to the Community Forest project. In terms of the government's intentions to create new public-leisure-providing entrepreneurs, the identity analysis suggests that the objective is still a considerable way off. Farmers who were diversifying at the time of the survey (1996) appear to be commercially oriented agricultural producers who are opposed to the Community Forest proposals. Further, the diversification projects chosen match the farmers' custodial role rather than the more free-market oriented 'entrepreneurial' diversification schemes. Thus, the rapid establishment of a craft industry based around the 'trees with everything' policy of the Community Forest (Countryside Commission, 1990) appears to be unlikely. In terms of becoming leisure providers, it appears that farmers are currently engaged in a conflict with the urban public to retain their established position and thereby self-identity as farmers. In particular, their ability to see themselves as stewards is being altered. Consequently, undertaking a scheme encouraging public access to the farm is likely to be met with considerable disapproval from the farming community and loss of status as a 'good farmer'. That this is a community-wide phenomenon was evidenced in that there did not appear to be any major association between the identity types and farmer attitudes to the general public.

The following conclusion chapter draws on all the information presented in the study to provide an overview of the influence of farmer self-identity on the uptake of the Community Forest scheme. The wider implications of the findings are also discussed and an assessment of the overall approach made. Suggestions are made for further research into farmer decision-making using an identity-based theoretical framework.

Chapter 10: Conclusion

This study has investigated how farmer identity resistance may contribute to the slow uptake of the Community Forest scheme in the Marston Vale, Bedfordshire. As with all other 'community woodland' projects initiated under the Conservative government of the late-1980s the Marston Vale forest has been failing comprehensively to attract farmers away from the production oriented roles towards a more entrepreneurial approach to farming based on the philosophy of 'trees with everything'. The rationale for this study was based on the suggestion by Williams *et al.* (1994) and Allison (1996) that 'underlying' farmer resistance to the government's community woodland schemes is the fact that much of their sense of identity is derived from farming. Thus, whereas studies into afforestation schemes have tended to concentrate on the economic and managerial issues involved in establishing woodland (e.g. Gasson & Hill, 1990), there may also be considerable cultural resistance to Community Forestry.

10.1 Achieving the objectives

In the introductory chapter, three main objectives of the study were outlined, namely; (1) to develop a conceptual framework for investigating the role of farmer identity on agricultural decision-making, (2) to use the conceptual framework as a basis for investigating farmer identity structure and its influence on the uptake of the Marston Vale Community Forest scheme, and (3) to obtain an in-depth understanding of why woodland and diversification may conflict so strongly with farmers' current sense of self-identity, and how this may influence the development of the Community Forest.

The conceptual framework

Establishing a new conceptual framework for the investigation of farmer self-identity within the broad framework of behavioural geography was an essential aspect of the study. To date research into farmer decision-making has tended to concentrate on farmer

satisficing behaviour which has predominantly been perceived as driven by attitudinal motivations. This is despite the recognition by researchers that a more socially oriented approach would be beneficial. A review of the geographical literature on agricultural behaviour suggested that, while a number of frameworks have been proposed for investigating the influence of the self-concept on behaviour, there is no one accepted framework. Rather, researchers have gone through a process of recognising its potential influence and applying different methodologies and reinventing terminologies for similar or even identical concepts. The result has been a rather piecemeal appreciation of the subject and the need for the establishment of a wider theory.

To establish a more rigorous conceptual framework, the study turned to the social psychology literature. In this discipline (which prior to the late-1970s had strong links with behavioural geography) substantial research into the identity-behaviour link has been conducted in the 1980s and 90s. Reviewing relevant literature revealed a number of methodological approaches, but only one - Sheldon Stryker's (1968) '*identity theory*' - that did not specifically look at behaviour within social groups and could therefore be applied to decision-making in the Marston Vale. From Stryker's theory a conceptual framework was developed. This framework proposes (following Stryker) that the self is structured into a hierarchical series of identities to reflect the social-groups (with differing behavioural expectations) which together comprise society. Behaviour is selected on the basis of the salient self-identity, where salience is controlled by the degree of commitment the individual experiences to the social-group (also referred to here as 'identity sub-culture'). A review of the geographical literature suggested four possible farmer identity sub-cultures - 'agricultural producer', 'agribusiness', 'diversifier', and 'conservationist' - and located considerable evidence to support the view that these 'peer groups' play an important role in determining agricultural behaviour.

The investigation of identity structures within the Marston Vale

The second objective, to investigate the structure of identity groups (and classify individual farmers accordingly) was achieved largely through the application of a

quantitative approach. An index of roles that may typify the various groups was carefully constructed from a preliminary survey. Through determining the pattern of roles and counter-roles (e.g. pro-conservation, anti-agribusiness etc.) it was hoped to determine which of the four identity groups farmers fall into, or, indeed, whether the hypothesised identity groups exist at all. Failure to detect four major groupings with behavioural characteristics typical of the hypothesised groups would suggest error in either the theory that had been developed, or the application of the theory. Multivariate techniques, namely principal components analysis and cluster analysis, were used to classify the 60 farmers from the survey into identity groups. To validate and describe the four groups tests for between groups differences were conducted using behavioural variables not used in the original clustering procedure but suggested in the literature as representing farmers from each of the four identity groups. The analysis showed that the cluster groups represented farmers with different behavioural patterns, thus lending support to the existence of a link between identity and behaviour.

Farmers from the 'agricultural producer' cluster are significantly older, less educated, and less likely to introduce changes to the farm. In contrast, farmers from the 'agribusiness' cluster are younger farmers, with larger farm areas and a more commercial approach to farming. 'Conservationist' farmers are closer to the agricultural producers in age than the other two groups, but are willing to implement changes on the farm and in particular, are more likely to maintain a major conservation scheme on the farm. Finally, the young 'diversifier' farmers showed a greater degree of intention to diversify - this despite the fact that they are no more likely to have a diversification scheme on the farm than other farmers.

In terms of farmers self assessments of identity salience and commitment to the identity, results suggested that two of the identities - agribusiness and agricultural producer - were closely linked. Farmers could be divided into two basic groups - those who are committed to maintaining the current agricultural system and those who, for reasons of necessity or desire for a more conservationist 'life-style' approach, are willing to introduce changes on the farm. A second finding was that all farmers viewed themselves predominantly as agricultural producers. This was the case even where 80 to 90 per cent of on-farm income was derived from diversification projects, emphasising the

importance of maintaining self-identity as a farmer within the farming community. In the analysis of identity salience farmers from the 'conservationist' and 'diversifier' groups (as determined by the cluster analysis) showed a significantly higher salience of the conservationist/diversifier identities than farmers in the pro-agriculture groups. From the established connection between identity salience and role-behaviour it can be surmised that farmers' attempts to maintain these self-images will influence their future decisions on Community Forest participation.

The social significance of woodland

Through the application of a qualitative approach a number of issues concerning farmer self-identity emerged. The first was the high social value farmers place on crops and livestock, which were widely viewed as the "be-all and end-all in farming" as the crop represents the culmination of all the farmer's nurturing and custodial skills - it is the means by which his/her claim to be a 'good' or 'real' farmer is judged. Concern is for two main aspects of the crop: physical appearance and crop yield per acre. In terms of physical appearance farmers are looking for uniformity in colour and height of the crop, and 'nice straight lines'. It can be speculated that the desire for uniformity stems from the need to display control over the crop and skill in the use and maintenance of agricultural machinery, as well as that the farmer cares for the crop (that they possess the desire and ability to nurture). Weeds in the crop are one of the main concerns of farmers and desire to maintain social status - i.e. not be 'ribbed' about weeds in a field - was noted as a motivation for the application of herbicides on a number of occasions. The other important symbol of ability as a 'good' farmer is the yield of the crop, usually measured in tons per acre. The importance of being able to 'shout about your crop' as 'a way of telling yourself you're getting better' has led to farmers bragging about crop yield, such that it may be referred to as a 'pub yield' when expressed in a social situation.

The crop therefore is of extremely high social value to farmers. This suggests that the loss to the farmer experienced through the afforestation of farmland is more than simply an economic one of lower returns and reduced land-value, but also involves a loss of ability to express his/her self-identity as a farmer. Woodland, when managed for

conservation or leisure purposes as proposed by the Community Forest (rather than strictly along plantation lines), does not conform to the farmer's concept of what a 'crop' should look like. There are no straight lines involved in amenity woodland, the form of trees can vary significantly and, once planted, woodland is likely to quickly fill up with 'weed' species such as hawthorn. Consequently, there is a great concern expressed that woodland will simply make the farm look 'messy' and inhibit farmers' ability to display their nurturing ability. Woodland planting (other than to provide small amounts of game cover or shelter) is thus of little social value to farmers and, when combined with the current low level of grant support, it is not surprising that few farmers have opted for community woodland.

The problem with woodland is that, even if it were possible to judge farming ability from its appearance, farmers have developed a simple system of transferring information (both social and economic) based on the practice of 'hedgerow' or 'roadside' farming - and the concealing nature of the woodland fringe largely prohibits this practice. 'Hedgerow farming' involves observing the crops of neighbouring farmers from the roadside while incidentally or otherwise, driving past the farm. It provides farmers with a measure of their own success as a farmer and thus, when neighbours make mistakes or farm poorly, a major source of satisfaction and self-esteem. Within the community there is a considerable degree of peer pressure in the form of 'stupid rivalry', 'jibing', 'bitchiness' and 'gloating' that revolves around pointing out the mistakes to other farmers. Consequently, it is widely acknowledged that farmers direct resources in a non-economic fashion (for the social value) towards maintaining the appearance of roadside fields. The practice of observing other farms from the road is so well established that it, in itself, has become symbolic of good farming practice with farmers making such comments as 'any farmer worth his salt' any 'any proper farmer' engages in the practice of roadside farming.

In comparison to crops and livestock, woodland is not a highly visible land-use, but conceals the quality of management unless a farmer is interested enough to ask for permission to view the woodland, or is involved in shooting (where the woodland is judged only on its suitability for sport). Only two farmers (both 'conservationists') in the study mentioned entering woodlands on neighbouring farms for any reason other than

shooting. Thus, in a system where roadside farming provides an important means of communicating skill in the farming role, woodland does not display husbandry skill and therefore holds little status value.

An additional source of resistance for farmers lies in their own mythology of the 'farmer steward' - a self-perception of particular importance currently as it was used to diffuse accusations of environmental exploitation during the 1980s. Farmers have a particular belief about being born to farming rather than farming being a skill to be learnt as in any other business. Their claim that farming is 'in the blood' encourages many farmers to believe their role as agricultural producer is somehow pre-ordained and they have been infused with a moral responsibility to nurture life and feed the human population. In the Marston Vale study there was a perceived lack of a 'spiritual' connection between farmers and trees for many of the farmers interviewed - a general lack of 'trees in the blood'. This perceived lack may simply be due to the fact that many farmers were brought up without substantial areas of woodland around, or were brought up believing woodland to be a nuisance. Regardless, the lack of any 'in the blood' connection between farmers and woodland may prove a major reason for farmers who believe this mythology simply dismissing woodland with the 'farmers not foresters' argument.

Another issue that arose is that the farm itself as a dependent of and at the same time a provider for the farmer may develop an identity of its own as it represents (a) the accumulative role-play of previous generations of farmers, and (b) the means with which a farmer can display significant symbols of the 'farmer' identity. In this way the boundary between the identity of the farmer, the farm family, and the farm itself becomes blurred. Farmers observe that the good reputation of a farm may continue even if the farmer him/herself is not farming the land well and it may take decades or generations of good farming before a new farmer is accepted as a member of the farming community. This continuity of 'farm identity' where the existing farmer's ability is only part of the criteria for judging the farm may explain the long established importance of 'maintaining the name on the land' (e.g. Marsden *et al.*, 1986). As the identity of the farm has been developed through the toil of previous generations, the current farmer may experience a moral obligation to the historical occupants of the farmland to maintain its agricultural character.

On a more practical level, there was evidence to suggest that farmers do not perceive the forestry role as providing them the level of interest that arable crops provide because (a) the annual harvesting 'race' that appeals to competitive members of the community (and also provides status) is absent from commercial woodland, (b) the long-standing status of annual crop yield as a measurement of self-improvement is lacking, (c) the satisfaction of seeing the full crop life-cycle is missing, (d) the satisfaction from 'gambling' with crop varieties, planting times, and harvesting is minimised because of the length of time before financial return is possible, and (e) as an unsubsidised form of income, woodland does not allow farmers to play the 'subsidy game'. The problem with woodland being uninteresting to farmers is that, as such, it is not talked about within the farming community. Farmers who have planted woodland have not received positive reinforcement from neighbouring farmers.

In addition to the woodland issues, the study also investigated farmers' willingness to move into more entrepreneurial roles, and the point at which a farmer may no longer be perceived as a farmer by the general farming community. It was established that a diversified farmer must fulfil two main criteria to continue to be seen as a 'good farmer': (a) the farmer must maintain direct contact with the land through the meaningful performance of farming roles, and (b) he/she must hold responsibility for the managerial (custodial) decisions on the farm. In the case where a farmer diversifies to the point that he/she needs to employ a manager for the farm and his personal contact with the land is only symbolic, that farmer is likely to lose prestige within the farming community. For example, the one Marston Vale farmer to place his entire farm in voluntary set aside no longer maintains social contact with neighbouring farmers and does not perceive himself to be a farmer. A similar fate may await others who engage in large-scale forestry if they are required to spend substantial amounts of time in non-agricultural activities.

10.2 Critical appraisal of theoretical and methodological framework

Restatement of the theoretical/methodological framework

As discussed above, one of the main objectives of the study was the development of a new theoretical framework (within the remit of behavioural geography) to investigate the influence of farming culture/identity on decision-making in the Marston Vale. The suggestion was forwarded (Chapter 4) that an approach based on self-identity may take advantage of the more stable nature of the self-identity construct to provide a better means for predicting behaviour than the more traditional attitude approach. This is particularly so at a time when farmers are being forced to consider major changes in the farming role to incorporate non-agricultural activities.

The broad theoretical perspective adopted for this study was one of structural symbolic interactionism. This perspective proposes that society is structured into groups with similar behavioural expectations of their members, and that these behavioural expectations provide the individual with a directive for action. Individuals develop identities through interaction with the groups, and these identities enable the individual to determine which behaviours are appropriate to the situation and to assess the possible social consequences of a particular course of action. As society is structured into a multitude of identity groups the individual may also maintain a number of identities. These multiple-identities are structured into a hierarchy of importance. Building on this, Sheldon Stryker (1969) proposed that the relationship between self-identity and behaviour may be investigated by examining the relative salience of particular identities within the hierarchy. It is Stryker's theory that provides the basis for the conceptual framework.

The conceptual framework focuses on the importance of farmer self-identity in determining role choice, and suggests that commitment to being a certain type of farmer may result in 'identity resistance' - a reluctance to change to adopt roles that do not concur with their existing self concept (see Figure 4.2). The symbolic interactionist perspective that all behaviours are to some extent symbolic suggests that changes

proposed by the Community Forest may have more than economic consequences as they may restrict farmers' ability to project their self-identity through role-behaviours. It was proposed that the concepts of commitment, identity salience, role-behaviour, significant symbols, social status, and satisfaction/self-esteem as a farmer should provide a framework around which to base a broader study of cultural resistance to the adoption of the Community Forest scheme in Marston Vale.

The investigation of the role of farmer self-identity followed a combined qualitative/quantitative approach. The quantitative approach (following the positivist methodology used in other tests of 'identity theory') was used to investigate identity structures within the Vale and, in particular, to determine through the use of psychometric scales and multivariate analysis, (a) whether the four postulated identity groups ('agricultural producer', 'conservationist', 'agribusinessman', and 'diversifier') exist, and (b) if this was the case, which of the groups individual farmers belonged to. The qualitative approach was employed to investigate the identity environment in the Vale, in particular, the significant symbols of farming, means of transmitting 'farmer' status, and sources of farmer self-esteem. In the qualitative case, while the approach followed the broad remit of the conceptual framework, the investigation did not directly apply measures of a predetermined theory.

The quantitative approach - use of psychometric scales

The conceptual framework used to investigate farmer self-identity was unusual in that, against current trends, there was a substantial quantitative component in the study. In particular, the use of psychometric indices to investigate farmer behaviour is one that is not common in current geographical research, the last strictly comparable approach in the UK being Carr's (1988) application of Fishbein and Ajzen's (1975) Theory of Reasoned Action. This warrants some discussion of the problems associated with the application of the approach.

The first problem that arose with the application of the quantitative section was in arriving at the terms to define the four 'post-productivist' identity groups. Where psychometric measurements are applied it is critical that the interpretation of the terms

(particularly terms to define identities) are meaningful to the group to be investigated. Originally it was intended that the identity groups tested should be 'traditional', 'agribusiness', 'conservation', and 'entrepreneur'. However, it quickly became evident in the preliminary study that two of these terms were not acceptable to the members of the farming community. First, the term 'traditional farmer' while intended to mean any farmer who has not adopted one of the post-productivist options (i.e. traditional in the sense of continuing the tradition of the previous couple of decades) contained significant negative connotations suggesting out of date farming practices. In a similar vein, the definition of 'entrepreneur' raised significant concerns amongst farmers who in general regarded entrepreneurs as urban 'wheeler-dealers' rather than farmers. While replacement terms 'agricultural producer' and 'diversifier farmer' were found, the meaning of both these terms was not as precise (from the perspective of the researcher) as the original terms as they reflect directly on actions rather than the overall farming philosophy employed. This is one of the problems of employing a quantitative approach where little flexibility is provided to investigate some of the more complex issues of self-definition.

The second issue was that it is difficult to ascertain how well farmers understood the psychometric scales. Certainly, some farmers appeared to have little problem in understanding the concept of scales, but then others, particularly the older farmers with lower levels of schooling, did not appear to be as comfortable with the concept. In a couple of cases repeated prompting was required by the researcher to elicit a response (e.g. 'between here and here?'). In general, it is recognised that scaled techniques are not as reliable for the general population as for the student populations commonly used in social-psychology research (Schumann & Johnston, 1976) - therefore there is always a question about the suitability of the approach for farmer studies. Despite this, measures such as Likert scales are commonly used in agricultural research (e.g. Carr, 1988; Gasson and Hill, 1990; Wilson, 1996) as they are the easiest way of gauging relevant psychological attributes such as attitudes, goals and values.

One important use of psychometric scales was in the application of the role-behaviour index - the index of role behaviours used to divide farmers into the four hypothesised identity groups (see Chapter 5). The division of farmers in this fashion is not without potential controversy. One possible criticism that may be levelled is that the successful division of farmers into the four hypothesised identity groups was inevitable, i.e. if the instrument is established to locate four identity groups then it is not surprising that four identity groups are found. What the index fails to account for is the possibility that other identities may play an important role in determining behavioural choice on the farm. One identity in particular arose from the results of the principal components analysis - that of the 'parent' or 'family provider'. Evidence that there was a strong successional strategy vector suggests that inclusion of a 'parent' identity may have improved the overall result of the analysis, as successional interests appear to exercise influence separately to the different post-productivist farming strategies. In support of this, no significant differences between farmers with successors and those without were observed for any of the four identity salience scales.

While the approach only investigated four identities, it would be incorrect to assume that the multivariate analysis would inevitably generate four groups representing the four identity groups hypothesised. Without the careful preliminary work in selecting items for the index that were symbolic behaviours of the hypothesised identities, the cluster groups could easily have shown no significant between group differences or have resulted in an analysis containing more than 4 main clusters. However, it must be remembered that cluster analysis only provides an aid to the interpretation and produces no probability statistic with which to judge the significance of the result. In order to confirm the validity of the technique it would be necessary to carry out repeat studies using identical or similar methodologies. Without a probability statistic there is no means of estimating the probability that the clustering shown in this study occurred at random. Repeated successes using the approach would suggest that it may provide an accurate means of dividing farmers into identity clusters.

Proponents of the so-called 'cultural turn' may argue that there is little place for such a positivist approach in modern geography. This is particularly so given that there is an alternative methodology available: that of using subjective judgement to place farmers into identity groups - an approach which has been used with some success by Shucksmith (1993). Nevertheless, as with most methodological approaches, there are advantages as well as disadvantages to using the quantitative approach. The first disadvantage is that the process of establishing the index requires careful preliminary investigation in order to obtain index items that will correctly distinguish between farmer types. If the index is not correctly constructed then it is unlikely to be able to distinguish the identity groups. Second, the multivariate techniques require a large number of respondents in order to be viable. Thus where a study involves, for example, only a dozen farmers, the quantitative approach is entirely inappropriate. Third, the index does not allow the researcher any flexibility in guiding or developing the classification. Once the survey has begun the classification system tested is that hypothesised and does not allow for the researcher to be able to redefine the criteria for classification. Again, this can be offset to some degree by careful preliminary investigation.

In terms of the advantages, there are two main reasons why the quantitative approach may be desirable. First, where the judgement is subjective and the researcher is attempting to link identity to behaviour it may be difficult to separate cause and effect. For example, if the researcher is aware of the existence of diversification schemes on a farm this may assist his classification of the farmer as a 'diversifier' - yet a number of the farmers in the diversifier group had not diversified but intended to do so in the future. The second problem with the approach is that it may be less able to account for structural complexities of the identity construct, i.e. that identities may be as much defined by roles that should not be performed as roles that should be performed. The purpose of multivariate analysis is to help interpret structure within complex data-sets and where hierarchically structured multiple-identities are concerned this ability may prove particularly valuable.

The overall conceptual framework

In the introductory chapter it was observed that a number of human geographers have suggested that combining the strengths of qualitative and quantitative approaches is where the future of human geography lies. This study used a mix of the quantitative and qualitative to investigate two different aspects of the identity question. A candid analysis of the success of the respective approaches would have to conclude that the qualitative investigation yielded the more interesting results, including; the importance of roadside farming and how woodland planting can interfere with the process, the symbolic significance of crops for maintaining position as a 'real farmer', and the identity conflict present between farmers and other members of the 'community' referred to in the term 'Community Forest'. The quantitative analysis, in contrast, was directed at a limited number of very specific questions about the nature of farmer self-identity and its relation to identity-salience and commitment. While this was a necessary step in the investigation - namely, to establish that the identity groups existed in the Vale and the link between self-identity and behaviour - it bore less direct relevance to the question of the future development of Marston Vale than aspects of the qualitative investigation. Rather, the results should be regarded as contributing to the development of theories of identity within the field of behavioural geography.

Aside from ensuring that farmers from all four identity groups were selected for the qualitative study, the quantitative identity analysis was only rarely integrated with the more intensive work. Separating farmers out into identity types did produce some interesting results, in particular revealing the gap between the thinking of 'conservationist' farmers and those of the other three groups. However, it was apparent from the qualitative investigation that there is a strong 'farmer' culture within the Vale that extends across all of the identity groups and, consequently, that all farmers share understandings of many of the symbols of the 'good farmer'. Consequently, the analysis tended to concentrate on farmer identity at this level, rather than at the sub-culture level. This may be regarded as a feature of the study that may be improved in future investigations now that a greater understanding of some of the general aspects of farmer self-identity has been developed.

10.3 Policy implications

One of the most important policy implications of this research lies in the selective targeting of resources for community forest development. The study found that different identity groups held different beliefs about appropriate role-behaviours farmers may perform. Thus, if farmers can be identified as being of specific farmer 'types', resources may be distributed according to the need of the group. For example, 'diversifier' farmers may not require encouragement to change the farming role, but rather require to be freed from having to farm the land as intensively as possible and to be convinced that woodland is a commercially viable proposition. In contrast, 'conservationist' farmers, many of whom have sufficient land and appreciate the intrinsic value of woodland, are better targeted with publicity emphasising the conservation benefits of establishing woodlands. Agribusiness farmers, as with diversifiers, need to be convinced that woodland is a commercial proposition - however, in this case there is no concern that farmers may be financially constrained from taking land out of arable production. As far as the 'traditional' farmers are concerned, the strength of resistance to any role change is so considerable that their resource allocation should be kept to a minimum.

The division of the older farmers mainly into the pro-change 'conservationist' and anti-change 'traditional' groups also has implication for current theory on the targeting of 'elderly' farmers. While Potter & Lobley (1992) observe that the lower consumption needs of elderly farmers suggest they may be targeted for a new publicly recognised role as countryside managers, in fact, the two 'older farmer' groups represent opposite ends of a spectrum of acceptance of conservation measures, with 'conservationists' already engaged in major conservation schemes, and 'traditional agricultural producers' firmly entrenched within the farming ethos. Conservationist farmers appear to have already involved themselves in conservation schemes and there is absolutely no evidence to suggest that older farmers from outside this group (with or without successors) are likely to wish to deviate from the farming role. Targeting older farmers for conservation/extensification schemes is therefore unlikely to prove as successful a strategy as previous studies would suggest.

In terms of policy for the encouragement of farm diversification and the creation of the new generation of woodland 'entrepreneurs', the study suggests that not all forms of diversification move farmers away from the farming role and farming identity. Small scale 'agricultural' forms of diversification (e.g. small-scale contracting) have little impact on the farming identity at all, and may simply represent the sort of diversification that farmers have always engaged in. Similarly, 'custodial' forms of diversification (such as managing industrial units) fit in with farmers existing self-image as a custodian of the land and consequently do not have a substantial impact on farmers perceptions of the 'farmer' role. Rather, they may serve to simply reinforce established forms of farming in the Vale by providing valuable financial support for the existing farming systems. The true 'entrepreneurial' forms of diversification not only involve the greatest moves away from the farming identity, but also represent a high risk/high return financial strategy. Results showed that farmers who had engaged in this form of diversification were likely to have planted significantly larger areas of woodland on their farms, much of it on advice from the Community Forest team. The implications of these findings are that, if the new woodland 'entrepreneurs' are to be encouraged, policies directed at providing financial incentives should be aimed at supporting entrepreneurial forms of diversification such as construction, manufacturing, processing and marketing. In the case of the Community Forest these may be based around a woodland industry. The more popular custodial forms of diversification - including 'easy-care' leisure enterprises such as caravan parks and bed and breakfasts which may be left largely to the wife - are unlikely to produce a shift in the perceived role of the farmer to degree required for a Community Forest to become established.

In terms of converting farmers to the benefits of farm woodland, one important finding of the study is that it may be beneficial, in the first instance, to encourage farmers to plant woodland in the orderly structured fashion which symbolises the presence of a 'good farmer'. Farmers in general prefer neat tidy organised woods to the diverse weed-filled environments that are preferential from a conservation perspective. In order to engage woodland management as a farming role publicity should not push woodland as a weed-like 'leave it and let it grow' crop but emphasise its the need for nurturing and management - i.e. the opportunity to display the symbols of good farming ability. The development of conservation-style woodlands envisaged by policy-makers may follow

once the tradition of woodland management is again established as part of the role of a farmer. In this context, any show farms - whether intentional or otherwise (e.g. Berry Farm) - should be very carefully tended to demonstrate that woodland can be managed in a 'neat and tidy' fashion. The importance of 'roadside farming' for communicating status amongst the farming community suggests this may be a very important step. The problem is in balancing the sort of woodland that the public appreciate with woodland that farmers may appreciate; if either side is neglected interest may be lost. One possible solution may be for community woodland developers to learn from the farming culture and simply put greater management effort into roadside woodlands rather than those in the interior of a block.

Other policy recommendations relate to the establishment and initial approach of the communicators of the Community Forest concept. These recommendations may also be extended to other agri-environmental projects where the voluntary principle is upheld.

First, one recurring theme from the research was how the Community Forest team did not fit into the farming culture, nor understand the farming perspective. References to the administrators as part of the 'Green Wellie Brigade' and the 'Coffee, Roll and Sausages Gang' suggest that they may even have been seen to form an counter-identity to that of the 'farmer'. Part of the problem is caused by the display of inappropriate significant symbols that can cause conflict. For example, Farmer 33 'diversifier' approves of the Community Forest concept in general, but suggests that the scheme has been mismanaged through the selection of the wrong type of personnel. He notes; "The first guy that came around to the farm about the Community Forest arrived in a green Citroen with open sandals and a beard. It would've been nice to see a man with country clothes and a shooting badge ... not a dreamer." Such problems may be overcome through the simple measure of recruiting members of staff with a greater understanding of the farming culture.

Secondly, and on a similar theme, policy makers appear to take little account of the fact that language may have different connotations for different identity groups within society. There is no doubt, for example, that there is a difference between the definition

of 'farmer' commonly used in Community Forest literature and the farming definition of 'real' or 'good' farmer - which is both rich with historical and social prerequisites and places substantial limitations on behavioural choices. Possibly the most important area in which the policy makers erred in this respect was in naming the scheme the 'Community Forest' scheme. To farmers, 'community' has a meaning closer to 'public' than to the concept of 'communities of interest' (including farmers) suggested by the planners (Countryside Commission, 1990). Similarly, the farming definition of 'forest' is generally one that involves vast tracts of untended dense woodland, and has a meaning closer to 'wilderness' (the antithesis of a cultural farmed landscape) than the 'Norman forest parks' proposed. An alternative name for the scheme such as 'Woodland Development Zones' may have appealed more to the farming community because of lack of the 'public' and 'wilderness' connotations, and the inclusion of a term that recognises the progressive nature of farming. Of course, the root of the problem lies in the fact that the name of any scheme designed to benefit all sectors of society is unlikely to please all because the symbolic meaning of language is likely to be different for every identity or interest group involved.

Thirdly, the Countryside Commission's recommended initial approach of using artist's impressions of the completed forest as promotional material (see MVCF, 1993, P162) - an approach suggested in the *Advice Manual for the Preparation of a Community Forest Plan* (Countryside Commission, 1990) - should not be repeated. Images of the completed forest were constructed without prior knowledge of either field ownership or the wishes of resident farmers. Farmers know their field boundaries well (sufficiently to draw them from memory) and each field has its own name and its own identity. Producing maps of the proposed 'end result' of voluntary environmental enhancement schemes - whilst perhaps appealing to the public - suggests direct interference with one of the most important symbols of farming and one that may incorporate hundreds of years of family history and farming culture. Many of the farmers interviewed mentioned these proposed forest plans as a catalyst for the initial conflict between the farming community and the Community Forest team. What inspired the Countryside Commission to leave the main consultation with the farming community - the Farm Liaison Project - until after the scheme had been publicly launched and the boundaries

fixed is unknown, but it may have been related to the political objectives of Community Forestry and the need for rapid establishment.

Fourthly, the marketing approach employed by the Community Forest team of mailing out large quantities of glossy publicity material does not follow the traditional channels of communication within the Vale and is, in fact, seen as counter to farmers' self-image as being "careful with their money" and "mean and stubborn" (farmer 10). A number of farmers mocked the approach and cited it, and the lack of concrete 'on the farm' action, as an example of how the Community Forest was simply providing 'jobs for the boys' and should not be taken seriously. Farmer 9, a 'conservationist' farmer who has engaged in a Community Forest project - describes the process of pamphleting as "It's flogging a dead horse ... They'd get more respect if they came out to dig a few holes for me" - a response which typifies the overall feeling within the local community. In a situation such as the Marston Vale where information is transferred rapidly (for example, about my presence) by word of mouth and through the process of roadside farming a large 'slick' advertising campaign may prove an inefficient means of employing scant funds.

For the European Union the implications of the study are simply that, while the Community Forest is not a particularly good example, the design of agri-environmental schemes is best left to the individual member states who have a greater ability to respond to local cultural factors than central European policy-makers.

10.4 Future research

There are two main areas that require further investigation in order to develop a more complete picture of the influence of self-identity on agricultural decision-making. First, it would be useful to conduct (in association with any identity study) an in-depth study of social networks within an area, and investigate how social networks relate to farmers' self-identity. Through the use of a procedure such as 'social network analysis' (see Barnes, 1979; Warriner & Moul, 1992; Stokowski, 1994) it may be possible to identify clusters of farmers who constitute peer groups within the farming community. If the theory proposed here is correct, then farmers within the peer groups should maintain similar, if not identical, identity structures. The second area requiring further study is the

interaction between the identities and roles of the farmer and other members of the farm family, which is frequently the focus for agricultural studies (Redclift & Whatmore, 1990). In particular, it appeared from informal discussions with farmers that the construction of conservation schemes such as the butterfly conservation area, were partially attributable to a desire to please the spouse. This suggests that the farmers' identity as a 'spouse' (in the case of conservation behaviour) or 'father' (in the case of the 'business' roles where the farmer is considering succession) may also influence their choice of role-behaviour. There is thus a considerable amount of work still to be done on the social/cultural environment surrounding the farmer, and the division of role-behaviour within the farm family.

This study has suggested a number of possible avenues for future research to explore. One particularly interesting area, and one that is potentially of great value to the implementation of policy, is the identity specific meanings of words. This study suggested that words such as 'community' and 'forest' may carry entirely different connotations for members of the farming community than they may perhaps hold for the public or the policy implementing groups. An example of a practical use of such a study may be in emphasising in publicity brochures aspects like 'straight lines', or 'neat and tidy' rather than using symbols that may appeal more to the public such as 'natural' or 'diverse'. Understanding the language of farming is also likely to help us - perhaps in unexpected ways - in developing a better understanding of the farming culture itself.

If there is one major methodological innovation of this research it is the concept of studying the self as multi-layered (as is the general perspective in social-psychology) rather than treating the individual farmer as though their values, attitudes and goals are uni-dimensional. The problem with maintaining this restricted perception can be illustrated with the example of Carr (1988). From a study based on an attitude approach (the Theory of Reasoned Action - Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980), Carr concludes that farmers' conservationist behaviour cannot be easily predicted using attitudinal measures. However, the problem with this approach from an identity perspective is that, while farmers may evaluate their conservation behaviour highly, if they, for example, evaluate commercial roles as more important, then, given a behavioural choice, the conservation oriented attitudes that are less likely to be acted on

(also see Patrick *et al.*, 1983). In this case, it is the *salience* of the identity construct that is important, not the strength of the attached attitudes. Investigating the salience of self-identity may thus provide a better indicator of future behaviour.

A good example to support this contention can be found in Macnaughten's (1995) study of public attitudes to countryside leisure. In this study, Macnaughten used three cultural voices (also see Gagnon, 1992) - 'pro-development', 'pro-quietness' and 'escape and freedom' - to introduce a series of attitude questions about the future development of the countryside. The process of introducing a cultural perspective in this way (making different identities salient) strongly influenced participant response such that the response of the 'pro-development group' to the attitude scales was, for some questions, the opposite valence to the 'pro-quietness group'. As with the Marston Vale study, Macnaughten (1995, P143) found that the effect of age, socio-economic status, gender, and use of the countryside were mostly insignificant and "generally of a far smaller scale in comparison to the effects of the three voices." From which he suggests, "the public's expressed opinions of 'attitudes' toward key leisure interests in the countryside *will be radically influenced by the context in which they are being placed*" (P142). For farmers this is also likely to be the case. By assuming the approach adopted in this study and investigating the salience of the sub-cultural 'voices' of 'agricultural producer', 'agribusinessman', 'conservationist' and 'diversifier' in the self-hierarchy it has been possible to resolve the problem observed by Carr (1988) and develop a better general approach to investigating agricultural behaviour.

The results of this study suggest we should be cautious about the use of focus groups (see Millward, 1995) as a tool for behavioural research. Although, as Cloke (1997: P371) observes "In some universities now a Ph.D. is not a Ph.D. unless it is based on at least some focus groups" there is good reason not to accept the approach uncritically. The question that is not dealt with (as there is no way of appraising it) is, to what extent does the group discussion elucidate the 'deeper meanings' of the social group and to what extent is it simply establishing a new social group 'identity' through discourse? Could not the 'deeper meanings' extracted in this manner simply be indications of other, less salient identities - and therefore of *less* relevance, rather than greater? Macnaughten's (1995) results provide a warning that once an identity has become

established as appropriate (salient) all subsequent attitudes and values may simply reflect that identity - but these need not necessarily be the attitudes and values that would be exposed by a different group.

There are many possible applications of an identity approach to agricultural research and research in behavioural geography in general. This study has added to work by researchers such as Weerdenburg (1973), Seabrook and Higgins (1988), Shucksmith (1993), and van der Ploeg (1993) who all recognised that farmer's perceptions of themselves and their efforts to maintain these self-perceptions in the eyes of significant others may influence their decision-making. Whether the 'identity theory' approach becomes established as a standard approach for investigating the influence of self-identity on behaviour seems unlikely. With the current research direction in geography moving increasingly towards intensive qualitative studies, there does not seem to be an obvious place for the application of strictly quantitative techniques (such as Stryker's 'Identity Theory') - despite their wide application in other disciplines. The study outlined here revealed a number of important issues about the relationship between self-identity and behaviour. My suggestion is that agricultural researchers considering employing a behavioural approach (i.e. based on attitudes, goals, and values) to investigate agricultural decision-making should make considerations for the possibility that much of the response of farmers to the need for agricultural reform will be dictated by their desire to maintain their self-identity as a 'good farmer'. Whether that means adopting the same framework or not may depend on the nature of the investigation, but failing to take any account of identity factors would leave out an important element of what motivates farmers in their choice of agricultural land-use.

Without Williams et al. (1994) and Allison's (1996) observation that farmers' self-perceptions underlie their negative responses to farm woodland, it is doubtful that this study into farmer identity would have been undertaken. Thus it seems appropriate to conclude with their observations in mind. It is clear from this study that Williams et al's suggestion that 'farmers' (or more specifically 'good farmers') do not perceive themselves as foresters is true. While there are many cultural symbols within the farming profession that are important for self-definition, woodland is not one of them.

As Allison observes, it is *farming* that gives farmers their identity and sense of achievement, and anything that interferes with the agricultural use of the farm can only threaten this sense of identity. While some sub-cultures within the farming community are more amenable to woodland than others, in general, woodland offers few benefits but has very noticeable cultural as well as economic disadvantages. Establishing a Community Forest in the Marston Vale will be a slow process indeed if the current generation of farmers are required to be develop into entrepreneurial farming-foresters.

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Appendix i: The effect of dutch elm disease on the landscape of Marston Vale

A recent source of change to the environment of the Marston Vale has been the arrival of dutch elm disease in the 1970s (see Jones, 1981). The origin of elm planting in the Marston Vale region of Bedfordshire relates to two historical events of the 1800s, namely (a) the deforestation of woodland that accompanied the corn boom of the early 19th century and the replanting of trees along hedgerows as compensation (Fitchett, 1943), and (b) the enclosures act, and the resulting profusion of boundary hedges with accompanying trees. The timing of these events and the popularity of the multipurpose and locationally suited elm tree led to the hedgerows being populated with substantial numbers of mature elms (160-130 years old) when dutch elm disease arrived. Consequently the effect on the landscape was devastating. The impact of the events of 15 - 20 years ago are well remembered in the oral history of the local farming community. A number of farmers made reference to the loss of hundreds of trees from a single farm, with the effect of changing the entire character of the landscape. For example, clay ridge farmer 42 gazing over an essentially treeless landscape recalls,

“Having the dutch elm disease has absolutely crucified the countryside around here. Marvellous it was. I bet we lost a thousand trees out that window all across the valley.”

For a number of farmers, dutch elm disease has resulted in substantial changes in their tree planting and management practices. In particular, the devastation of the landscape caused by the removal of the vast majority (some farmers estimated 90 percent) of hedgerow trees has recently led to a spate of plantings as farmers attempt to regain some of the historic character of their farms (reportedly, little changed in terms of tree coverage since the enclosures - MVCF, 1993). There is currently a considerable emphasis on planting trees to enhance the farm appearance. While this in itself is not unusual for farmers in Britain (e.g. Gasson & Hill, 1990; MVCF, 1992), the considerable percentage (15%) that indicated they were planting specifically to replace elm trees suggests that the loss of elms may have prompted this planting behaviour -

particularly as the former landscape is still well within living memory. For example, farmer 27 [Traditional] explains his motivation for placing trees in hedge gaps:

“The thing is, Dave and I remember what the farm used to look like before elm disease and it would be nice to think it was going back in that direction. Perhaps not to the intensity of elm trees.”

Thus dutch elm disease may have prompted a tree planting response prior to the arrival of the Community Forest scheme - but one which was conceivably delayed by the farm economic crisis of the 1980s.

Appendix ii: Outline of government schemes.

Adapted from Evans & Morris (1997: P192-193).

Environmentally Sensitive Areas (ESAs)

Marston Vale Community Forest is not a designated ESA

The UK government's main agri-environmental policy. Within a specified geographical area, farmers can sign voluntary 10 year management agreements to farm in an environmentally friendly way for which they receive 'standard' or 'flat rate' payments. In many ESAs, the more restrictive the practice adopted, the higher the rate of payment available. The scheme is popular with farmers but its success is questionable.

Countryside Stewardship (CS)

Payable within MVCF

Initiated by the Countryside Commission in England, the scheme has an emphasis on landscape conservation on certain targeted landscape types. Nature conservation, access and historic site benefits are also supported. The scheme represents a 'market-led' approach, as the state can buy conservation 'goods' which the landowners possess. Farmers anywhere can enter, providing they own land that exhibits the target landscape features. Priority is given to land with existing public access or close to towns (Countryside Commission, 1994) - e.g. the Marston Vale Community Forest zone. A study by Morris & Young (1997) suggests that the CS scheme does not appear to be achieving its goal of producing widespread environmentally beneficial farming practices.

Sites of Special Scientific Interest (SSSIs)

Exist within MVCF

SSSIs are imposed on landowners to protect the nature conservation and geological interest of small areas. Restrictions are placed on the range of activities that can be undertaken, known as potentially damaging operations (PDOs). In return, compensation is given for potential profits that are sacrificed by landowners. Agriculture accounts for 37% of those SSSIs damaged annually.

Countryside Access Scheme

Payable within MVCF, but as of 1997 no reported takers (MVCF, 1997).

This scheme (launched in 1994) offers farmers participating in set-aside schemes payment to permit free public access to their set-aside land. The scheme does not require farmers to undertake environmental improvements. Adoption rates are low.

Woodland Grant Scheme and Farm Woodland Premium Scheme (formally FWS)

Payable within MVCF

Launched in its current format in 1991 following the experimental Farm Woodland Scheme, this voluntary scheme provides farmers with financial assistance towards the cost of planting and offsetting the considerable time lag between planting and harvesting. The objective of these schemes is “To enhance the environment through the planting of farm woodlands, in particular to improve the landscape, provide new habitats and increase biodiversity. In doing this, land managers should be encouraged to realise the productive potential of woodland as a sustainable land use” (MAFF, 1997: P5). Greater levels of payment are available to farmers who plant deciduous trees because of the greater maturation time. Establishment grants are provided through the WGS and income subsidies paid out via the Farm Woodland Premium Scheme where the farmer is eligible. Although in 1995 rules were changed to allow areas receiving WGS/FWPS subsidies to count towards set-aside requirements in some circumstances (MAFF, 1995b) response has nevertheless been consistently poor.

Arable Area Payments Scheme

Payable within MVCF

The Arable Area Payments Scheme (AAPS) offers payments per hectare to growers of cereals, oilseed rape, sunflower seed, soya beans, peas for harvesting dry, field beans, sweet lupins and linseed. There is a minimum area for applying for the AAPS of 0.3 hectares, but no maximum area for payment. However, there is a maximum limit to production on the basis of regional base areas whereby if claims exceed the historic level of production all claims will be reduced proportionately. In order to receive AAPs farmers must set-aside a proportion of their land from arable production (MAFF, 1995). The AAPS constitutes a major source of income for farmers within the Marston Vale.

Set-aside Scheme

Operates within MVCF

Rotational (also called ‘compulsory’) set aside is obligatory for all farmers who wish to receive the Arable Area payments. The scheme requires that a proportion of farmland is neither put to any agricultural use nor used for non-agricultural purposes, however, it can be used to grow crops for non-food use under certain conditions (see MAFF, 1995a). The proportion of farmland to be placed in set-aside is currently decided on an annual basis. This is due to be set at 0% with the year 2000 reforms to the CAP.

Farm Diversification Grant Scheme

The FDGS was introduced in 1988 to encourage agricultural diversification. It consists of three main components. A capital grant to assist in the establishment of an on-farm business, a feasibility grant to cover 50% of the cost of a diversification study, and a marketing grant towards the cost of employing agents to carry out promotional functions. Diversification subsidies are provided for a limited number of enterprise types (see Ilbery & Stiell, 1991; Ilbery & Bowler, 1993).

Appendix iii: Copy of the Community Forest directors questionnaire

Question 1

How large is your Community Forest area? ha

Question 2

Approximately how many hectares of trees have been planted within the Community Forest zone so far? ha

Question 3

Approximately how much of the above area (see question 2) is broadleaved and how much coniferous?

Broadleaved ha (or %) Coniferous ha (or %)

Question 4

Have there been any farm based leisure activities opened within the Community Forest since its establishment? (tick one box) Yes ☐ No ☐

If yes, what sort of activities are they?

Are any planned? (tick one box) Yes ☐ No ☐

If yes, what sort of activities are they?

Question 5

Please describe how you believe the uptake of the forest is progressing since the forest was first conceived of (tick one box):

- Much faster than expected ☐
- faster than expected ☐
- slightly faster than expected ☐
- Exactly what was expected ☐
- slightly slower than expected ☐
- slower than expected ☐
- Much slower than expected ☐

Question 6

If uptake is not occurring at the expected rate, why do you think this is? (Please use additional paper if necessary).

Question 7

What date was your Community Forest given the official go-ahead from the DOE?

.....

Question 8

What are the most common reasons given by farmers for planting trees?

Question 9

“In providing a rationale for not undertaking Community Forest planting, a common response is that ‘we are farmers, not foresters’. Many farmers do not see forestry, diversification into leisure or other entrepreneurial activities as being part of their job.”

What is your opinion of this statement and do you see it being a major factor in the development of Community Forests? Is the perception changing and, if not, how do you believe farmers may be convinced to take on other roles. Please write your thoughts on the matter in the space provided and on additional paper if necessary.

Please return to Rob Burton, DMU Bedford, 37 Lansdowne Rd., Bedford MK40 2BZ.
Thank you very much for your time.

Appendix iv: The main questionnaire survey

Background on farm and decision-making

1) How large is your farm? (acres)

2) Has the area of your farm changed since 1987?

Increased area (acres) Decreased area (acres)

3) How much of a say would you estimate the following people have on making decisions about the commercial running of the farm?

Yourself %
 Your spouse %
 Family partners %
 Other family members %
 Non-family partners %

4) Which of the following groups provide you with advice and ideas on the management of your farm?

Source	a) Very important	b) Important	c) Unimportant
ADAS			
NFU			
County Council			
Agricultural shows			
National newspapers			
Financial consultants			
Management consultants			
Community Forest Team			
FWAG			
CLA			
The farming press			

5) What is your agricultural background? (please tick)

- a) Brought up on farm ☐
 b) Parents were farmers/farm workers ☐
 c) Rural, but not raised on farm ☐
 d) Urban upbringing ☐

You as the manager Previous generations

6) How long has your family been on this farm?

7) What are your main crops/produce?

Woodland

8) How much woodland do you have on your farm?

9) Have you planted any trees on your farm?

What for?

10) Have you removed any trees?

Why?

11) Has your family any history of **woodland planting** (over the last two or three generations)?
yes ☐ no ☐

If yes: How much woodland was planted ?

If Yes: When was the woodland planted ?

If Yes: For what purpose/s was the woodland planted ?

12) Has your family any history of **woodland management** (over the last two or three generations) ?
yes ☐ no ☐

If Yes: For what purpose/s was the woodland used ?

13) Are you currently participating in any government diversification or conservation schemes and, if yes how much land area (if applicable) is involved?

		Area
a) Farm Woodland Premium Scheme	<input type="checkbox"/>
b) Set Aside	<input type="checkbox"/>
c) Countryside Stewardship Scheme	<input type="checkbox"/>
d) County Council Schemes	<input type="checkbox"/>
e) Others?

14) Do you have any plans to plant woodland or trees **in the future**?
yes ☐ no ☐

If Yes: How much will be planted?

If Yes: What purpose/s will the woodland/trees be planted for?

15) Have you planted or removed hedges **in the past 15 years**?

Planted extra yards Removed yards

16) Do you intend to plant or remove hedges in the next 5 years?

Plant extra yards Remove yards

Diversification, Conservation and Intensification

17) Have you diversified away from agricultural production since 1987?

yes ☐ no ☐

If yes: In what way did you diversify and why?

18) Approximately what proportion of the farm's annual income comes from on-farm diversification enterprises?

Description	Proportion (%)
Activity 1:
Activity 2:
Activity 3:

19) Do you plan to diversify in the near future? yes ☐ no ☐

If yes: What are you thinking of doing and why?

20) Have you engaged in any conservation projects on the farm? (e.g. pond construction, habitat creation, etc.).

If yes: Please describe.

21) Has your overall management approach changed since 1987?

Conservationist	More	-----	Less
Diversified	More	-----	Less
Businesslike	More	-----	Less

23) Do you intend to intensify production on the farm?

If Yes: what are the main objectives?

Constraints to land-use

24) Is the farm:

- a) freehold ☐
- b) tenanted ☐
- c) leased ☐
- d) mixed tenure (specify %). ☐

25) Does the **tenure system** affect your ability to make land-use decisions on the farm?

yes ☐ no ☐

If Yes: In what ways are you restricted from doing what you would like?

26) Does the **planning system** affect your ability to make land-use decisions on the farm?

yes ☐ no ☐

If Yes: In what ways are you restricted from doing what you would like?

27) Have you borrowed any capital to maintain or develop the agricultural side of the farm ?

- a) No borrowing ☐
- b) Some borrowing ☐
- c) Heavy borrowing ☐

28) Do you have any outstanding debt ? (Please tick one)

- a) No debt ☐
- b) Some debt ☐
- c) Heavy debt ☐

The role of the farmer

Please read through the following list of possible farming roles. By placing a tick in the appropriate position along the line, please evaluate each of them (on a scale of 'Always' to 'Never') as to how frequently you believe you ought to perform them.

1. Encourage your children to become farmers

Always |-----| Never

2. Take any opportunity to expand your farm size

Always |-----| Never

3. Have nature 'conservation' as the number one priority in decision-making

Always |-----| Never

4. Involve your family in the running of the farm

Always |-----| Never

5. Look to learn new business skills not connected with agriculture

Always |-----| Never

6. Create new wildlife habitat

Always |-----| Never

7. Invest any surplus profits into non-farming enterprises such as the stock market

Always |-----| Never

8. Use environmentally friendly farming practices

Always |-----| Never

9. Use as much new technology as you can afford (e.g. computers, mobile phones, etc.)

Always |-----| Never

10. Make extra income through on-farm diversification schemes

Always |-----| Never

11. Use or establish woodland for commercial purposes (e.g. timber or leisure)

Always |-----| Never

12. Farm in a manner that will leave the land more productive than when you started farming it

Always |-----| Never

13. Listen to the advice of environmental groups

Always |-----| Never

14. Mix with a wide range of urban people

Always |-----| Never

15. Preserve existing hedges and wildlife habitat

Always |-----| Never

16. Farm in a manner that respects all the traditional farming values

Always |-----| Never

17. Experiment in your land-use decisions

Always |-----| Never

18. Have 'maximising profit' as the number one priority in decision-making

Always |-----| Never

19. Regard farming more as a life-style than a business

Always |-----| Never

20. Borrow capital to invest in improving the agricultural side of the farm

Always |-----| Never

Your own identity

Question 1: How well do the following identities *describe* yourself?


a) Agricultural producer

Describes myself |-----| Does not describe myself


b) Agri-businessman

Describes myself |-----| Does not describe myself

c) Nature conservationist

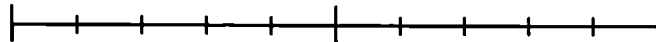
Describes myself  Does not describe myself

d) Diversifier / Small business entrepreneur

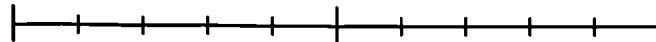
Describes myself  Does not describe myself

Question 2: How *important* are the following identities to your feelings about yourself ?

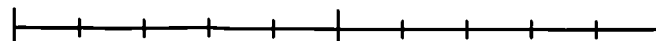
a) Agricultural producer

Important to who I am  Not important to who I am

b) Agri-businessman

Important to who I am  Not important to who I am

c) Nature conservationist

Important to who I am  Not important to who I am

d) Diversifier / Small business entrepreneur

Important to who I am |-----| Not important to who I am

<h2>The opinions of others</h2>

Question 1: How important is it to you that your *friends and family* view you as behaving in the following manners:

a) As an agricultural producer

Very important they do |-----| Very important they don't

b) As an agri-businessman

Very important they do |-----| Very important they don't

c) As a nature conservationist

Very important they do |-----| Very important they don't

d) As a diversified farmer / Small business entrepreneur

Very important they do |-----| Very important they don't

Question 2: In general, how do you think ***your friends and family*** would react if you adopted the following management strategies?

a) Ran the business along strongly commercial lines, as an agribusiness

Strongly Approve |-----| Strongly disapprove

b) Rely completely on agricultural production (cropping etc.) for income

Strongly Approve |-----| Strongly disapprove

c) Rely heavily on diversified projects and/or off-farm income to keep the farm profitable.

Strongly Approve |-----| Strongly disapprove

d) Rely heavily on government conservation schemes to keep the farm profitable.

Strongly Approve |-----| Strongly disapprove

The Farming Community

This question looks at your local farming community. I am interested to see if groups of friends hold similar or different opinions on what the role of a farmer should be.

Question

How many people are you **friends** with whose approach to farming falls broadly within the following categories. Please do not put the same person down twice - choose the category you believe they best fit into.

Number of friends (circle)

Agri-businessmen	0	1	2	3	4	5	6+
Diversified farmers	0	1	2	3	4	5	6+
Conservationist farmers	0	1	2	3	4	5	6+
Agricultural producer	0	1	2	3	4	5	6+
Non-farming friends	0	1	2	3	4	5	6+

Demographic Questions :	Confidential
--------------------------------	---------------------

1) What is your highest educational qualification?

- a) Left school without exams ☐
- b) O-level, CSE or school certificate ☐
- c) A-level ☐
- d) Tertiary education (Diploma, BA, etc.) ☐
- e) Others ☐

2) Have you had any training in forestry? Yes ☐ No ☐

If yes, please describe

3) How old are you?

- a) <30 ☐
- b) 30-39 ☐
- c) 40-49 ☐
- d) 50-55 ☐
- e) 55-60 ☐
- f) 60+ ☐

4) Do you plan to stay in farming until you retire? Yes ☐ No ☐

If no, why not?

5) Do you hope that your son/daughter (or another member of the family) will succeed you on the farm?

- | | |
|--|--------------------------|
| a) No | <input type="checkbox"/> |
| b) No family successor in next generation | <input type="checkbox"/> |
| c) Yes | <input type="checkbox"/> |
| d) Yes, but successor not interested | <input type="checkbox"/> |
| e) Yes, but successor undecided/children too young | <input type="checkbox"/> |

6) Approximately, what is your annual net income?

- | | | |
|----|-------------------|--------------------------|
| a) | less than £20,000 | <input type="checkbox"/> |
| b) | £20,000-£30,000 | <input type="checkbox"/> |
| c) | £30,000-£40,000 | <input type="checkbox"/> |
| d) | £40,000-£50,000 | <input type="checkbox"/> |
| e) | £50,000-£60,000 | <input type="checkbox"/> |
| f) | £60,000-£70,000 | <input type="checkbox"/> |
| g) | £70,000 plus | <input type="checkbox"/> |

Open Questions

1. What's your overall impression of the Community Forest Scheme?
 - e.g. Is it a good idea or bad idea and please explain why you believe this.
2. Do you see the provision of leisure facilities for the public as something farmers in this area would ever seriously consider?
 - Why or why not?
3. Do you see forestry as a venture farmers in this area would ever seriously consider?
 - Why or why not?

Appendix v - Biographies of farmers involved in the qualitative interviews

'Agribusiness'

Farmer 10: Middle-aged farmer involved in productivist management of the farm which contains some of the best soils in the vale. He has some experience farming overseas and is the only farmer who gladly - and with cause - describes himself as a prairie farmer as he has removed all but the boundary hedges on the farm. His opinions of the Community Forest scheme are largely negative for commercial reasons.

'Diversifier'

Farmer 6: A young second generation farmer from the floor of the Vale who is one of the few 'owner occupiers' to live in the core area proposed for Community Forest development. He has a young family and is concerned that he should be allowed to continue farming without interference - consequently he is very strongly opposed to the Community Forest scheme.

Farmer 11: A young farmer from the other side of the clay ridge to the west of the Vale. He is the only farmer in the area who has undertaken a tree related diversification scheme - the provision of Christmas trees. Nevertheless he strongly advocates that farmers only desire is to farm and opposes the Community Forest development on this basis.

Farmer 23: A young owner occupier farmer from the south-west sector of the Vale. He is proposing a major planting scheme with the Community Forest following the use of old pits on the farm for waste disposal, but is nevertheless largely opposed to the project. Particular concern was displayed about the possibilities of tenant farmers losing land to the Community Forest. He cites the case of farmer 40 as an example.

Farmer 37: A middle-aged sheep farmer who entered farming from the building profession because of a desire to farm since he was a child. He is a member of the local NFU and is not opposed to the Community Forest development but believes it is being implemented incorrectly and consequently is unlikely to succeed.

Farmer 40: A middle-aged tenant farmer with a large farm but no prospective heirs. He is well known within the farming community and equally well known is that his

landlord has withdrawn land from his lease for Community Forest purposes. He believes the Community Forest would be better concentrating on the clay pits and should not plant on farmland.

'Conservationist'

Farmer 8: A middle-aged farmer with a farm on relatively poor soil on the southern boundary of the Vale. He and his wife are heavily involved in the Young Farmers organisation. In front of the house he has dug out a pond and planted a small woodland around the outside - mainly to attract wildlife. The Community Forest team have conducted a cost/benefit analysis looking at planting a commercial woodland on poor land on the farm.

Farmer 39: An older owner occupier farmer located on the valley floor who is on the verge of handing control over to his two sons. Granting of development permission allowed him to convert his farm buildings to agricultural units, which now provide him with over 50% of his income. He describes himself as a 'countryman' and sees his relationship with nature as avuncular. Nevertheless, he is opposed to the use of agricultural land for woodland planting and believes the Community Forest should restrict themselves to the clay pits.

Farmer 44: A middle-aged owner occupier sheep farmer with very strong conservationist principles (his neighbours, when interviewed, described him as a 'conservationist'). He has established a wooded butterfly conservation area and was the only farmer to visit the woodlands of neighbouring farms to look at wild flora and fauna. In the early 1990s he won the Farmer's Weekly 'sheep farmer of the year' competition and is very attached to livestock farming. Despite his conservationist leanings he is largely opposed to the Community Forest scheme as it stands.

Farmer 57: A middle-aged owner occupier who only entered the farming profession 7 years ago from a non-farming back-ground (jeweller) when his father-in-law retired. He is not regarded by some other farmers to have established himself as a 'real farmer', with one agribusiness farmer describing his farm as a 'circus'. He practices some conservationist management techniques on the farm and believes the Community Forest is a good idea

'Traditional'

Farmer 27: A middle-aged mixed tenure farmer on the southern boundary of the forest who farms in close association with his brother. They are the only farmers to have recently (1970s) converted woodland into arable land and are not at all interested in woodland planting on the farm. He believes that the Community Forest may produce some benefits - but not for farmers - and is opposed to the trend towards agribusiness in farming.

Farmer 45: An older owner occupier farmer who has placed his entire farm in set-aside and has consequently been ostracised by the local farming community. In accordance with his withdrawal from farming he does not identify with being a 'farmer' and is fairly cynical about the farming community. He is strongly opposed to the Community Forest project, believing that the countryside is best left in the hands of farmers who have the experience to manage it. He places no store in education and is concerned that the forestry workers are like gypsies.

Farmer 56: An older owner occupier farmer with a small farm (only marginally viable) near Cranfield. He is in farming largely because he enjoys it and gains a great deal of pleasure from being out in the countryside with nature - consequently he is strongly opposed to agribusiness. Unusually he is proud of the condition in which he maintains his footpaths and gains self-esteem from the positive comments of walkers. He believes the Community Forest is 'OK' as long as he is able to remain unaffected by it.

Appendix vi: Full tables from the principal components analysis

1. Full pattern matrix from the principal components analysis of 19 items from the role-behaviour index showing loadings for each item

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
1. CHILD#FM	.06590	.06029	.83147	.18808	-.18231	-.28992	.16964
2. EXPAND#F	-.06310	-.10375	.77152	-.01632	.18501	.15667	-.16981
3. CONS#ONE	-.04002	.73783	.05979	-.05241	.09086	.02151	.03741
4. INV#FMLY	.15735	.10534	.13136	-.09103	-.20116	-.73485	-.13819
5. BUS#SKLL	.44049	.23005	-.02703	-.00218	.07300	.28904	-.40191
6. WILD#HBT	.33626	.67286	.01603	.05973	-.00552	-.10388	-.14134
7. STCK#MKT	.33936	.33300	-.02515	.38918	-.28401	.16510	-.21568
8. ENV#FRND	.12841	.21746	.06384	-.65606	.23478	-.26351	-.37305
9. NEW#TECH	.04828	.04330	.20562	.03824	-.16771	.57474	-.22550
10. DIVERSFY	.52151	.10431	-.11978	-.18802	-.06925	.49504	.00120
11. EST#WOOD	.84526	-.00793	-.08143	.01396	.14419	-.23470	.12312
13. ENV#GRPS	.10099	.01114	-.18757	-.77730	-.25390	.03978	.01570
14. MIX#URBN	-.03607	.07363	.31521	-.18756	-.65510	.08155	-.10203
15. PRES#HBT	-.19097	.64155	-.13263	-.34061	-.17694	-.00069	.26629
16. RESP#TRD	-.17124	.18746	.29594	-.41586	.09856	.10413	.50679
17. EXPRMENT	.57801	.18205	.29513	-.02276	-.03652	.17813	.11012
18. MAX#PRFT	.12281	.11362	.17614	-.02964	.76992	.15081	-.08639
19. F#LFESTY	.26935	.05239	-.06371	.10607	-.01552	-.00381	.85854
20. BORR#CAP	.53994	-.46864	.26316	-.22855	-.16091	.12932	-.11274

2. Full factor correlation matrix

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Factor 1	1.00000					
Factor 2	.18668	1.00000				
Factor 3	.11841	.02415	1.00000			
Factor 4	-.00569	-.16282	-.08286	1.00000		
Factor 5	-.10135	-.03091	-.06474	.02722	1.00000	
Factor 6	.12918	.01571	.07850	-.01835	-.02915	1.00000
Factor 7	-.20922	.02932	-.10199	-.02995	.01724	-.13402